

Air Conditioning & REFRIGERATION

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NEWS

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10% Commercial Tax Is Retained Despite Protest

Appliance Levy Extended By Senate To Cover Gas And Oil Equipment

WASHINGTON, D. C.—Despite protests by manufacturers that it would be discriminatory, the proposed 10% excise tax on commercial refrigeration equipment was approved without change by the Senate Finance Committee as part of the \$3,672,400,000 defense tax levy reported to the Senate for final action this week.

Electrical appliance manufacturers won a point, however, when the tax (Concluded on Page 16, Column 1)

Makers of Expansion Valves Adopt Repair Policy To Save Metal

DETROIT—In a move aimed at conserving metals, in line with the aims of the defense program, manufacturers of expansion valves used in the refrigeration industry apparently are in the process of instituting a new policy of repairing defective expansion valves within the guarantee period, instead of replacing them with a new valve.

One manufacturer has already sent (Concluded on Page 16, Column 4)

Records of 1921 Point A Bitter Lesson

In Fallacy of Over-Buying & Hoarding

The Harry Alter Co.
1728 So. Michigan Ave.
Chicago, Ill.

To the Editor:

What can happen to business men with all this drivel of "prices-going-up" can best be illustrated by looking at the attached record of what happened to prices in 1921.

Then as now everyone bought because prices were going up and so of course prices did go up. And the faster the climb in prices, the more panicky became the buying. Premiums were paid for delivery then just as now.

So when everyone had what they considered a comfortable surplus of inventory laid aside (for what purpose Heaven only knows) the frenzied buying subsided. After that it was just a matter of months before prices started tumbling and then nobody wanted to buy and everyone seemed to have huge and high priced inventories. And many a firm went bankrupt as a result.

And if we don't watch out it's going to happen again soon. Because there is too much buying for inventory, for protection against higher prices (which makes for higher prices) and too much hoarding for fear of the future.

With higher taxes and a broadening of the tax base with limits on instalment selling, there won't be as

Milwaukee Union Overrides Dealers On 25% Pay Raise

MILWAUKEE—Over protests of a distributor-dealer committee that such demands were out of line with present conditions in the industry, the Servicemen's Union has insisted upon a minimum wage of \$40.80 per week for all journeymen service workers employed by distributors and dealers in Milwaukee County, and is signing individual contracts with employers on this basis. The new contracts will be in effect until July 1, 1942.

The new wage scale demanded by the union is an increase of 25% over the minimum of \$32.16 which had been in effect during the previous year. Committee of the Wisconsin Radio, Refrigeration & Appliance Association had agreed that some increase in wages was warranted, but had protested the 25% jump as exorbitant.

Following preliminary conferences with union officials, the distributor-dealer group had offered a compromise wage of \$36 per week. This, however, was rejected by the union membership. A later compromise offer of \$38 per week also was rejected by the union, which notified the appliance committee that members had voted to go on strike unless the original terms of \$40.80 were met.

Unwilling to risk such action at the present time, the association accepted the wage provision, under protest, reserving the right to reopen the wage question if conditions should develop within the next several months which would warrant such action.

In offering the compromise figure (Concluded on Page 16, Column 2)

Your Chance to Talk—Sept. 10 In Detroit

Congress shall make no law . . . abridging the freedom of speech or of the press; or of the people peaceably to assemble and petition the Government for a redress of grievances.—The Constitution of the United States of America.

COME TO DETROIT Wednesday, September 10, if you are interested in helping the refrigeration industry secure proper recognition as an ESSENTIAL INDUSTRY. The NEWS invites anybody in the refrigeration business to come to its offices, at 5229 Cass Ave., on that day for a "town meeting" of the industry.

Ways and means of influencing Congress, OPM, OPACS, and others to grant needed priorities to this essential industry will be discussed. Anybody who has an idea to contribute will be heard. Men who have been in close contact with official Washington will tell what they know about the situation. Discussions will begin at 1:30 p.m.

In the current issue of the NEWS an item tells how nickel and aluminum are being allotted to the radio industry. Last week we told about the high priority ratings granted farm machinery. Dairy machinery has also been given high rating.

These industries, which happen to be completely united, got what they wanted by exerting pressure. Refrigeration, which actually is *more essential*, is making slow, halting progress because it lacks unity, because enough people aren't exerting their influence.

Today in America we have government by pressure groups. So, to save its own hide, as well as to continue its great contribution to America's health, the refrigeration industry needs to become a cohesive pressure group.

How can that be done? Nobody has come forward yet with an answer. Some groups are working valiantly. Others are waiting for someone else to do the job. So far the industry has thrown only a tiny portion of its collective weight into the battle.

Will this meeting in Detroit help the situation? Frankly, we don't know. That depends on how many people come, what their ideas are, and how willing they are to cooperate for the good of the industry. We do know that the "town meeting" idea (open to all interested parties, with no pre-meeting caucuses) is democracy in its purest form. If the idea of democracy is sound, then the idea of this meeting is sound.

In short, if all the various diverse elements in this industry can't get together under the neutral auspices of the industry's independent newspaper, then there is scant hope that they ever will be able to get anywhere.

Many precedents for such a meeting exist. In 1933, when the NRA came along (a somewhat comparable situation) the NEWS called a meeting of the industry in Detroit, which resulted in a tangible program. Similar meetings in the NEWS offices in later years resulted in the formation of the National Refrigeration Supply Jobbers Association and the Refrigeration Equipment Manufacturers Association.

OPM's Advisory Committee for the Air Conditioning & Refrigeration Industry, which is now being formed, will in no wise conflict with this "Town Meeting." The hand-picked OPM committee will no doubt be useful and, we hope, helpful. But it cannot operate as a pressure group.

And "pressure" is what we must bring to bear. How best to accomplish this aim will be discussed at the Detroit meeting. Come join us in a demonstration of Democracy at Work!

Philadelphia Sales Up 23% For 6 Months

PHILADELPHIA—Sales of 52,216 household electric refrigerators were made by dealers in this territory during the first six months of 1941, according to reports compiled by the Electrical Association of Philadelphia. This is an increase of 23% over the 42,694 units sold by dealers

(Concluded on Page 16, Column 3)

Arch Black Named Norge Commercial Sales Head

DETROIT—Arch Black, export manager for Norge division, Borg-Warner Corp., has been named to the additional post of commercial sales manager.

James Chapman has been appointed assistant commercial sales manager.

(Concluded on Page 16, Column 1)

OPM Committee Of Refrigeration Men Appointed

64 Representatives of The Industry To Serve On 8 Committees

WASHINGTON, D. C.—Initial meeting of the 64-member Industrial Advisory Committee to the Air Conditioning & Refrigeration Section of the Division of Purchases, Office of Production Management, will be held Sept. 4 in room 332 of the Federal Trades building here.

Call for the meeting was sent out by C. W. Shearman of OPM, who will act as chairman of this committee for the air conditioning and refrigeration industry. Mr. Shearman reports to James MacPherson, assistant director of the OPM, and will also be liaison man with other departments of the federal government who may be interested in the activities of the air conditioning and refrigeration industry.

One of the main purposes of the move was to give the industry a "focal point" in Washington and an established and approved basis of contact that would eliminate the necessity of constant travel to the capital by individual businessmen.

Membership on the committee is by invitation from OPM, and selection was said to have been made on the basis of "securing the talent that OPM needs," rather than on the basis of political or association connections. Membership is said to be representative of both large and small businesses, and also representative geographically.

OPM would not divulge the names (Concluded on Page 4, Column 1)

Freon Gets Rating As Industry Fights For Bigger Supply

WASHINGTON, D. C.—In a general preference order designed to assure proper functioning of hospitals and food preservation units such as household refrigerators, storage plants, etc., and to meet defense requirements, chlorinated hydrocarbon ("Freon") refrigerants last week were placed under priority control by the Division of Priorities of OPM.

The order assigns an A-10 rating for deliveries of these refrigerants for defense uses, such as Army and Navy hospitals and cantonments, and ship storage plants.

After defense needs are satisfied, the remaining supply is to be distributed according to the civilian allocation program announced by OPACS and reported in the NEWS of Aug. 27.

Ask More 'Carbon-Tet' To Boost Production

WASHINGTON, D. C.—Making the point that refrigeration applications in which "Freon-12" are used are seemingly more important than certain civilian uses of carbon tetrachloride (the shortage of which has created the shortage in "Freon"), the Materials Committee of the Air Conditioning & Refrigerating Machinery Association presented a strongly worded brief last week to the Division of Civilian Supply, OPM, requesting that at least 1,900,000 pounds of carbon tetrachloride be made available each month for (Concluded on Page 13, Column 2)

WHAT HAPPENED IN 1921 CAN HAPPEN IN 1942

A record of prices of certain staple items taken from Harry Alter's catalog of electrical supplies of June, 1920; June, 1921; and December, 1921.

No. 14 RC	2/8 In.	1/2 In.	B.X. Cable	3 In. Outlet
Wire	Loom	Conduit	No. 14 2 Wire	Boxes
June, 1920	\$11.60 M ft.	\$35.00 M ft.	\$110.00 M ft.	15¢ each
June, 1921	6.50 M ft.	21.00 M ft.	59.50 M ft.	10 1/2¢ each
Dec., 1921	6.15 M ft.	16.50 M ft.	47.50 M ft.	45.00 M ft.
				8¢ each

June, 1920 marked the peak of inflated prices and "shortages."

June, 1921 prices were 40-50% less and the only shortage was customers.

HARRY ALTER,
President

Prosperous Defense Workers Are Good Prospects For the Dealer Who Is Alert

LOS ANGELES—Alert appliance dealers here are slanting their sales promotion efforts in order to secure their share of the defense worker's increased income.

"It is not enough to depend on the older forms of promotion," says Tom Crosson of Platt's, a firm that is doing a good job of reaching the defense workers. "That is why we have adopted special means to reach these workers."

Among other dealers who have gone out after this market are Kay's, 52nd & Broadway, and Wilner's, 5812 Pico Blvd. Wilner's has been plugging used refrigerators at prices of \$39.50 to \$49.50 on terms of 50 cents a week.

Following is a list of the methods which are being used by the various firms to reach defense workers:

HOW TO REACH THEM

1. **Factory gate distribution:** Mr. Crosson utilizes this method by having several thousand reprints of his regular newspaper advertising run off and distributing these at the factory gates and the homes of new residents.

2. **Door prizes:** Tying-in with the sports club or the most active club in the particular plant by offering to donate a small appliance or other goods as a door prize for some club affair.

3. **Shop papers:** Advertising special buys in any industry or shop wide newspaper.

DIRECT MAIL PROMOTION

4. **Direct mail:** Compiling prospect lists from the license numbers of cars parked around the factories or in parking lots provided by the employers. Using a listing such as this as a direct mail aid has proven most profitable. Where the parking lot is behind closed gates, an employee may be hired to obtain the numbers.

5. **Bird dogs:** One dealer reports that he gives small gifts to every worker who will bring in another worker from the plant for a refrigerator. Other dealers believe that this plan tends to give the firm a bad name because of over-plugging, and feel it is better to work through

their legitimate salesmen.

The general feeling which refrigeration dealers and salesmen express is that while the present market may be a "seller's market" to some extent, this is not entirely true of their merchandise, because many workers are first buying automobiles and furniture. Hence the specialized advertising campaigns; while the workers in defense industries may represent only a small portion of the total employment, most of them feel that they have greater job security and therefore are more likely to be a basic market.

"One thing we have to watch," Mr. Crosson concludes, "is the question of credit. Many of the defense workers—particularly the younger ones—have gone 'hog wild' and will purchase anything offered them on time. We try to ascertain how long their job will last, as well as how much they have recently purchased on time."

'Roaming' In Kitchen Makes Prospects Buy

KANSAS CITY, Mo.—Turning customers loose in his model kitchen or model laundry has resulted in increased sales of ranges and home laundry equipment for Boyd Cousins, manager of the Kansas City Stove & Electric Co.

Located on the second floor, the small kitchen is equipped with all foods, spices, and other conveniences with which the customer might want to experiment. The customer may spend as much time as she wishes testing any appliance, alone if she desires. Invariably she "sells herself" with little or no help from the salesman, Mr. Cousins says.

In the basement showroom, three Bendix washers, complete with soap, bluing, etc. have been hooked up. After looking at a new model upstairs, the customer is invited to wash a bundle of her own laundry at the company's expense. Mr. Cousins, who handles only the higher priced appliances, estimates that he gets half of his washer sales in this way.

Night Appointments In Dept. Store Increase Both Sales & Price

DENVER—The major appliance department of Joslin's, department store here, wasn't making all the sales that A. H. Miller, appliance buyer, thought it should, because the store was open only during the day. Women who were "sold" on some appliance couldn't "sell" their husbands, who were working during the day and thus were unable to see the appliance for themselves.

After trying one scheme that failed, the appliance department hit upon a method of "night appointments" that not only increased sales tremendously but produced more sales in the higher price brackets.

First plan developed by Joslin's, the only dealership in the state handling two first-line appliance brands, Kelvinator and General Electric, was to keep the store open on Thursday evenings until 10 o'clock. Several departments, including appliances, were roped off with a sales staff on hand. This was widely advertised and attracted much traffic, but proved unsuccessful.

TOO MANY 'JOY RIDERS'

Too many "joy riders," prospects who merely came in to look with no intention of buying, wasted the salesmen's time. Salesmen would often spend several hours talking to visitors without developing a sale, thus defeating the purpose of keeping the store open at night. After a year, this plan was dropped and a new one evolved.

The new scheme, which has been in operation for several months, consists of a program of "night appointments." Any of the six salesmen in the major appliance department is permitted to make appointments with prospects for any hour between 8 a.m. and 11 p.m. When a salesman uncovers a prospect he asks her to make a thorough examination of the appliance in question, and then suggests an appointment for some time when both she and her husband can come to the store.

This policy is in effect at all times and is suggested to nine out of 10 women who stop in the major appliance department for any reason. If the woman agrees to such an appointment, the salesman notifies store officials that he has a night appointment, and is issued a pass which will be honored by the night watchman.

NO INTERRUPTIONS

The department houses a complete model kitchen, which is kept hooked up for demonstration, and more than 100 appliances on display. Salesmen can make their sales talks in the evening with none of the interruptions which occur during the busy regular store hours, and prospects themselves seem to appreciate the opportunity to spend time with the appliances without interruptions.

Prospects can frequently be sold a higher priced model than they had originally intended to purchase at these "night appointments," salesmen have found. "Prospects are far less price-minded in company with each other than when contacted alone," says Buyer Miller.

Salesmen are permitted to make appointments for any night in the week, although there are naturally few appointments for Friday or Saturday evenings. While salesmen work longer hours they are compensated by increased commissions, and the ease with which they complete sales, Mr. Miller reports.

Do You Know These Fundamentals of Appliance Advertising & Merchandising?

Just published by Business News Publishing Co. (publisher of Air Conditioning & Refrigeration News) is a new book "Appliance Advertising & Merchandising" (Price: \$2.00.) Written by R. E. Mangan, who for the last 10 years has been advertising manager and merchandising expert for one of the largest appliance distributing firms on the west coast, the book is full of down-to-earth information on making advertising and promotion methods pay out.

Parts of "Appliance Advertising & Merchandising"—such as that below—will be published in the News from time to time, to give readers the benefit of some of Mr. Mangan's stimulating thinking, but primarily to create a desire on the part of the subscriber to get and read this very helpful book.

BY R. E. MANGAN

(From Chapter 7 "Newspaper Layout, Copy, Illustrations" of the book, "Appliance Advertising & Merchandising.")

THE PROVE-IT-TO-ME ATTITUDE

Many appliance dealers consider no advertising any good that doesn't say, "Special this week only" or "Save \$25 on this model," or some such statement. For they will credit to advertising only those prospects that come in and say, "I want to see the appliance you advertised."

This thinking is based on the fact that other business expenditures all offer something tangible for the money. Rent pays for a store, commissions pay for signed orders, payments to the distributor are for stock that can be sold at a profit. Therefore, the dealer says, "Why shouldn't I expect tangible results from my advertising?"

The fact is, advertising does produce tangible results—it produces prospects, the raw material from which sales are made. But today's advertisement may not produce these results tomorrow. Part of the results will be traceable to today's ad, but the person who comes in next month may come in as a result of today's ad and of several other ads you run between now and next month.

It's difficult to put your finger on the results of an individual advertisement, no matter how productive it may be. Yet that is what many appliance dealers demand of their advertising. They insist that each advertisement pays its cost in traceable sales.

In an attempt to make advertising work this miracle many dealers go to almost hysterical lengths to *pull immediate, traceable store traffic*. They offer unprofitable specials, costly give-aways, premiums, and the like. They shout "Sale!" "Bargain!" forgetting all about the development of sales for next week and next month in their anxiety to pull in prospects today.

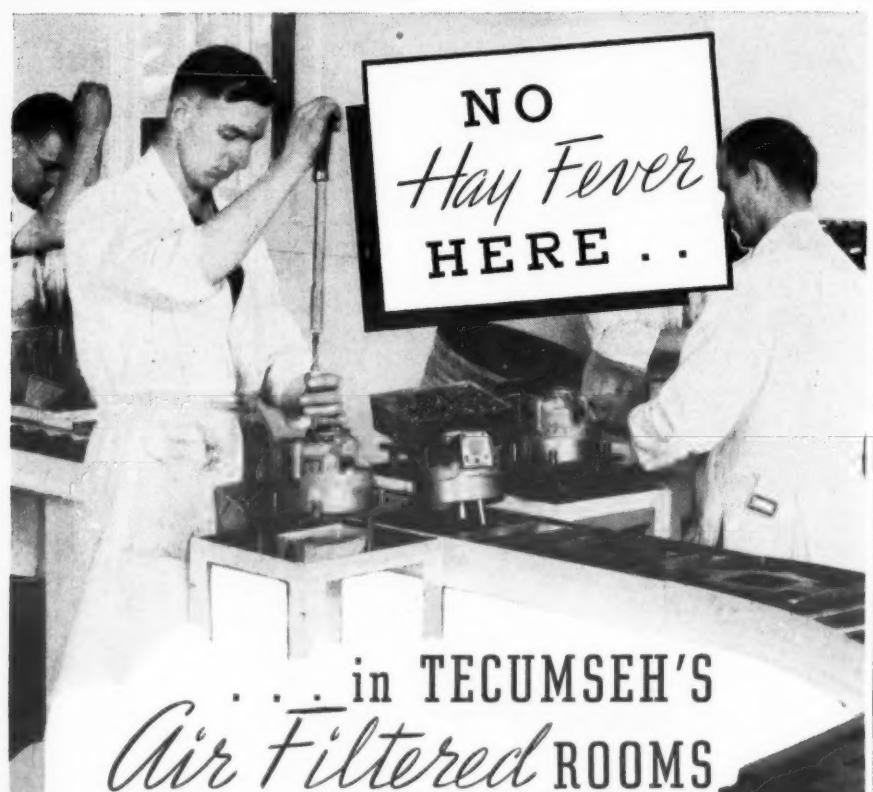
You must temper your advertising thinking with confidence in the power of advertising to build your business. If today's advertisement pulls a reasonable amount of store traffic, you can be confident that as one unit in a continuous campaign that advertisement will continue to help you for a long time to come.

EVERY RULE HAS EXCEPTIONS

So-called bait, or price, advertising that figuratively reaches out to the sidewalk and jerks people into your store by the scruff of the neck is not a healthy advertising diet for yours or any other business. But there are times when straight bargain advertising does have a place in your campaign.

If there is to be a price increase, announce it in an advertisement to push prospects off the fence. If you are over-stocked just before new models are announced advertise your clearance prices and release your capital to buy new stock. And, from time to time, a special sales event will put zip into your program.

But this type of advertising should be the exception and not the rule.



in TECUMSEH'S
Air Filtered ROOMS

HAY FEVER victims would certainly find relief if they could work in Tecumseh's air filtered assembly rooms. The most improved system of air conditioning has been installed to make these rooms dust proof so that each Chieftain unit is assembled under the most ideal conditions. This is just one of the many reasons for Chieftain's rapid growth in the refrigeration industry.

TECUMSEH PRODUCTS CO. TECUMSEH, MICHIGAN



Chieftain

Anaconda Copper
Refrigeration Tubes
Dependable!

ANACONDA

THE AMERICAN BRASS CO.
FRENCH SMALL TUBE BRANCH
General Offices, Waterbury, Conn.

SQUARE D IN
REFRIGERATION

DO IT ALL WITH SQUARED

SQUARE D COMPANY • REGULATOR DIVISION • DETROIT

Westinghouse Makes Informative Label Chart For Schools

MANSFIELD, Ohio—Interest in the informative labeling program instituted by Westinghouse Electric & Mfg. Co. at the start of the year as shown by comments from prospects, consumer leaders, and educators has prompted the preparation of a comparison chart for classroom use.

Ten labels describing the Westinghouse refrigerator line are printed on the inside spread of a folder. They are arranged in step-up fashion from the lowest to the highest priced models, with the extra features of each successively higher model listed beside each label. Prices, which vary regionally because of differences in transportation costs, are not printed on the folder, space being allowed for the dealer to fill in the local prices.

PURPOSE OF CHART

Explaining the purpose of the folder, a note reads, "This chart has been prepared to show the graduated steps from lower to higher priced refrigerators so the consumer can make a direct factual comparison.

"To all who are trying to teach consumers how to buy wisely, and to get the best value for what they desire to pay, we present these labels as examples that may be helpful in such work. The relation of price to value is not always fully apparent, particularly in products of mechanical construction.

"By plain description, we have tried to show how differences in the construction and equipment of various Westinghouse refrigerator models are reflected in corresponding differences in price. These differences enable consumers to buy the kind of refrigerator they want to own, at the kind of price they want to pay."

MATERIALS CHANGE

One problem the labeling program has encountered is the changes in materials used made necessary by national defense needs. Rather than reprint the labels every time one of these frequent changes has to be made, Westinghouse is attaching a red, white, and blue tag to its products which reads as follows:

"National defense, with which we are cooperating fully, may require us to depart from certain details of the specifications set forth in this Informative Label. Should any such departure be necessary for conservation purposes, you may be reasonably assured the alternative materials or deviations in specifications will be fully adequate to maintain the standards which this label describes. Your dealer will gladly explain any changes."

Philco Corp. Sales Top \$35 Million In 1st 6 Months of 1941

PHILADELPHIA—Consolidated gross sales of radios, refrigerators, air conditioners, and other products by Philco Corp. totaled \$35,211,279 in the first six months of 1941, as compared with \$22,016,332 in the same period of 1940.

Consolidated earnings of Philco and subsidiaries, excluding Canada, before taxes amounted to \$2,269,108 in the first six months of 1941, as compared with \$900,734 in the corresponding period last year.

Out of second-quarter earnings, a reserve of \$975,000 has been established to cover estimated liability for federal and state income and excess profits taxes under the terms of the revenue bill now before Congress. Of reserve, \$808,435 is on account of earnings in the second quarter, and \$166,565 is to cover increased taxes on earnings in the first quarter.

After allowing for this increased provision for taxes, Philco's net income in the first half of 1941 totaled \$919,108, or 67 cents per share on each of 1,372,143 shares of common stock, as against \$519,394, or 38 cents per share in the first half of last year.

The board of directors has declared a dividend of 25 cents per share on the common stock, payable Sept. 12 to stockholders of record Aug. 26.

Housewives Urged To Can With Refrigerator's Aid To Save N.J. Peach Crop

TRENTON, N. J.—In urging housewives to return to their almost forgotten skills of canning and preserving to help save the State's bumper peach crop of nearly 2,000,000 bushels which is now ripening, New Jersey's Secretary of Agriculture, Willard H. Allen, advocated the use of modern refrigerator facilities as a considerable aid in this work.

Mr. Allen explained that his suggestion to housewives to can for their own use was based on an appeal by defense officials to stop summer wastage because of the need for food during the coming winter, and on the expected increase in demand for commercially canned foods. He said canning houses of the state would be unable to use much of the peach crop because they now were engaged in tomato and other canning for which they were "geared."

July Sales In Virginia Show Slight Gain

ALEXANDRIA, Va.—Sales of 1,759 electric refrigerators in the territory of Virginia Public Service Co. during July brought the seven-months' total in this area to 10,255 units, a gain of more than 1,000 over comparable figures for 1940. July refrigerator sales in this territory last year were 1,712 units, and the seven-month total was 9,215.

Electric range sales, helped by a July total of 213, rose to 1,177 units, compared to 1,055 in 1940, while water heater sales for the seven months totaled 537 units, against 372 last year.

A comparison of July sales of the three leading appliances follows:

	1941	1940
Refrigerators	1,759	1,712
Ranges	213	132
Water Heaters	88	76

Roast of Month Contest Attracts Thousands

BRIDGEPORT, Conn.—Thousands of women are sending in their favorite recipes for oven-cooked meat dishes every month as entries in the 10-month-long "Roast of the Month" contest being conducted by General Electric Co., reports J. R. Poteat, range and water heater manager.

In March 2,296 recipes were received, in April 5,001, in May 3,526, and in June 2,297. And during the first four months of the competition more than 4,000 G-E range dealers had subscribed their dollar for active participation in the promotion.

Miss Dorothy Fowlkes of Dyersburg, Tenn., won the "Stratoliner" range for April; Mrs. E. C. Pickard of Evanston, Ill., was the May winner. At the completion of the contest the 10 range winners will be eligible for a grand prize of a complete G-E electric kitchen.

The six leading chefs who comprise the jury are George J. Nagel, Hotel Nicollet, Minneapolis; Eugene Wiolat, Hotel Adolphus, Dallas; Emile Wiolat, New Yorker, New York City; Ernesto Piron, Netherland Plaza, Cincinnati; J. A. Squire, Belmont Plaza, New York City; and Gene Capilla, Fort Shelby, Detroit.

U. S. Excise Tax In July Totals \$1,459,197

WASHINGTON, D. C.—Excise tax collections on mechanical refrigerators during July amounted to \$1,459,197.70, compared with \$838,710.83 in the same month of 1940, according to Internal Revenue Bureau statistics.

For the 12 months ended June 30, 1941, mechanical refrigerator collections totaled \$13,278,909.68, an increase of \$3,324,510.82 over those for the year ended June 30, 1940, which amounted to \$9,954,398.86.

Tax on radio sets and components totaled \$495,074.33 during July, as compared with \$397,741.34 in the same month of 1940. For the year ended June 30, 1941, radio tax collections amounted to \$6,935,182.03.

10 Special Features Make Up '10 Strike' In Philadelphia Drive Based on Bowling

PHILADELPHIA—A 10-point promotional program, built around a bowling theme, sparked the recent "Ten-Strike" spring appliance campaign sponsored here by the Electrical Association of Philadelphia.

Main emphasis of the drive was on electric ranges and water heaters, with refrigerators and roasters tied in with certain phases of the program.

The 10 campaign features, each a "pin" of the "Ten Strike," were as follows:

1. Special Cash Allowances. Philadelphia dealers received special allowances on ranges and water heaters during the campaign, explained in a special booklet prepared for the dealers, who later requested extension of the plan's closing date to July 31.

KITCHEN SHOW

2. Electric Kitchen Show. During the week of April 21 this show was held on two floors of the Edison building. Seven complete electric kitchens were displayed on the first floor, while on the second floor the latest models of all makes of ranges, refrigerators, and water heaters were on view. Cooking demonstrations were held daily in the model kitchens. This show was backed by two limerick contests and special advertisements inserted in daily newspapers by the association. In addition,

individual exhibitors and the utility advertised the show. Further publicity was obtained through radio spot announcements, broadcasts from the exhibition, and street car dash signs.

3. Newspaper Advertising. The association's year-around newspaper advertising was concentrated on ranges, refrigerators, and water heaters; and the schedule was stepped up from three insertions to 20 a week.

4. Radio Advertising. Evening station-break spot announcements and 100-word spots boosted the campaign. Twenty-four broadcasts were made directly from the Electric Kitchen Show.

OUTDOOR ADVERTISING

5. Outdoor Advertising. Two different 24-sheet posters on ranges and water heaters were spotted at about 60 locations. They also plugged the Electric Kitchen Show.

6. Cooperative Advertising Over Dealer's Signature. The association provided two large advertisements over the dealer's name in neighborhood newspapers to dealers who installed range window displays prepared by the Modern Kitchen Bureau and distributed the booklet "Famous Recipes by Famous Men."

7. Electric Cooking Schools. Range and roaster cooking schools were conducted by the "Philadelphia

Record" in 21 neighborhood theaters, and promoted by advertisements in neighborhood newspapers, movie trailers, and street car dash signs, as well as "Record" publicity. Gifts attracted 40% of the audiences to dealers' stores. Dealers also competed for \$150 in cash prizes for the best window displays in connection with this feature.

A three-day cooking school, directed by Jessie deBoth, was sponsored by the "Philadelphia Inquirer" on May 6 to 8.

NATIONAL ADVERTISING

8. National Advertising. The Philadelphia association used the same "Switch to Switches" theme in its activity to convert interest aroused by national electric range advertising into sales. Prominent mention was made of the current schedule in women's magazines.

9. Utility Advertising Program. The utility supported the campaign through its own advertising—newspapers, billboards, and car cards, plus bill enclosures sent to every customer and distribution of a special booklet on the low cost of electric cooking and water heating.

SPECIAL PROMOTIONS

10. Special Promotions. Dealers had, without charge, the services of utility home economists to furnish instructions to new purchasers of ranges. To encourage dealers to connect ranges for "live" demonstrations on showroom floors, the association refunded the cost of wiring on the basis of \$5 for each range sold after showroom installation. Maximum allowance was \$35.

KNOW YOUR REFRIGERANTS!

OF A SERIES OF ADVERTISEMENTS
DESIGNED TO HELP YOU SELL
REFRIGERATORS FASTER

Sure, Tom, talk about the safe refrigerant. But always emphasize appearance. Our units are finished with Du Pont DULUX.

Assure your prospect of a safe, efficient refrigerant!

WHAT should you say about a refrigerant? You should be able to tell your customer she's getting a *proved* refrigerant...one that's proved its efficiency in protecting food in thousands of homes.

But don't forget another feature that adds greatly to your sales talk. It's the finish, the *first* thing your prospect notices!

If your refrigerators are finished with Du Pont DULUX (and they probably are, because the majority of refrigerators today have a DULUX finish) you've got effective sales points that score heavily with housewives everywhere. Ease of cleaning...gleaming whiteness that *stays* white...resistance to chipping, cracking, food and grease stains—DULUX has everything women want in a finish.

Point out the Du Pont DULUX seal to your next customer. You'll find it *pays*. DULUX helps sell refrigerators *faster*!

E. I. du Pont de Nemours & Co. (Inc.), Finishes Division, Wilmington, Del.

PROFIT FOR YOU IN THIS FREE BOOK!

► It's helping many dealers to more profits. Write for your copy of "How DULUX Has Helped in the Sale of More Than 9,000,000 Refrigerators." Write DuPont, Room 715 G-S DuPont Bldg., Wilmington, Delaware.

DULUX
THE MODERN FINISH FOR MODERN LIVING...It saves work

64-Man Advisory Group To Meet With OPM On Industry Problems

(Concluded from Page 1, Column 5) of its original selections for the reason that "all acceptances had not been received." It is probable that the personnel of the committee will be made known following Thursday's meeting.

The 64 men from the industry will be grouped into eight committees of eight men each. These groups will function informally, suggesting items for discussion and action as they deem fit. A functional operating organization chart prepared by the OPM indicates the following committee titles for the air conditioning and refrigeration group:

"Industry Inventory Control and Analysis."

"Conservation, Production and Product Simplification."

"Government Contacts, Proposed Purchases, Procedure Education."

"Ratings, Priorities, Allocations."

"Adaptation—Plant Machinery to Defense Work."

"Study of Federal Purchases as Related To This Industry."

"Analysis of Government Specifications."

"Committee of Miscellaneous Reference."

War Order For Buffalo

BUFFALO—Buffalo Forge Co. has received a \$178,840 War Dept. contract for a fan system and equipment.



More than 20 years of high reputation...in every kind of refrigeration service...has established the name "Lipman" as a BUY word that breaks down sales resistance. Make this reputation your sales asset...for greater profit and better customer satisfaction.

Lipman
GENERAL REFRIGERATION DIVISION
Yates-American Machine Co.
Dept. AC-1 Beloit, Wisconsin

New 'Super-Board' Directs All Defense Efforts; OPM To Allot All Materials

WASHINGTON, D. C.—In two sweeping moves designed to expedite the production of arms for the United States and lease-lend nations and unravel the jurisdictional snarls in which defense agencies have been tangled, President Roosevelt late last week created a seven-member Supply Priorities and Allocations Board and the Office of Production Management issued a new basic document—Priorities Regulation No. 1—requiring right of way for all defense orders.

The new board, established within the Office of Emergency Management, is in supreme control of the defense program through its powers to fix priorities and allocate the supply of materials, fuel, power, and other commodities of all kinds to meet the demands of the Army, Navy, the defense-aid program, policies of economic warfare, and needs of the civilian population. It has been termed by a high defense official "the Supreme Court of the American economy."

WALLACE HEADS BOARD

SPAB is headed by Vice President Henry A. Wallace and includes William S. Knudsen, Director General of OPM; Sidney Hillman, Associate Director General of OPM; Secretary of War Henry L. Stimson, representing the Army consumer; Secretary of the Navy Frank Knox, representing the Navy consumer; Harry L. Hopkins, Special Assistant to President Roosevelt, supervising the Lease-Lend and Defense-Aid program; and Leon Henderson, Federal Price Administrator and Director of the OPM Civilian Supply Division.

Mr. Henderson's former Office of Price Administration & Civilian Supply now becomes the Office of Price Administration, and the Civilian Supply branch is shifted to OPM, with Mr. Henderson continuing in charge. This Civilian Supply Division will go on working out plans and programs for civilian allocation, which will be submitted through OPM to SPAB for final approval or amendment.

Thus the new board will establish production rates for refrigerators and other civilian items by determining the amount of materials to be allocated to competing non-defense factories after the needs of the military, defense-aid program, and economic warfare have been satisfied. However, actual administration of SPAB's policies by way of issuance

of priority certificates for the various purposes will be carried on through appropriate divisions of OPM.

"It is, of course, not contemplated that this board will actually pass on specific priority applications which are filed by the thousands every week," it was stated. "That will continue to be done in the priorities division. Only broad policies and general regulations for priorities and allocation will be determined by the board."

The White House said SPAB will follow general policies enunciated by the President and will sit with him from time to time, but that the question of distribution of finished material, such as planes, guns, or ships, to our Army or to defense-aid countries, would remain with the President. The board will determine total requirements of materials and commodities needed respectively for defense and civilian and all other purposes, and set up policies for the fulfillment of such requirements, and, where necessary, make recommendations to the President.

NELSON IS KEY MAN

Key man in the new organization is Donald Nelson, former OPM Purchasing Director who has been appointed Executive Director of SPAB and also OPM Priorities Director, replacing Edward R. Stettinius, Jr., who is now Lease-Lend Administrator. Mr. Nelson is the active administering officer of the board, and, under its broad policy and general regulations, will pass on the more than 20,000 priorities received weekly by the defense agency.

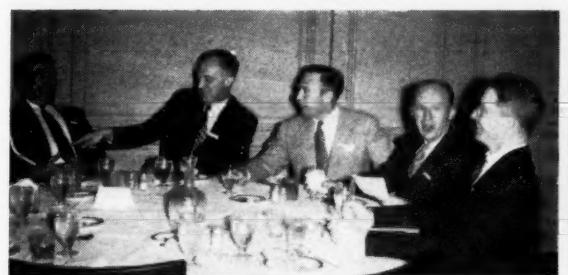
Other changes took John D. Biggers out of the directorship of OPM's Production Division and made him Minister to London to push the lease-lease program, and put Douglas MacKeachie in Mr. Biggers' old job.

The other important change in the defense set-up, the issuance of Priorities Regulation No. 1, establishes a series of broad rules and regulations applying to priorities orders and actions. Most vital provision is that which requires all manufacturers and producers to accept defense orders (subject to a few specific limitations) "even if acceptance will prevent, or delay, deliveries on non-defense orders or defense orders with lower preference ratings." This requirement applies to all manufacturers, producers, distributors, and dealers, in whatever category.

OPM said that since the new regulation lays down a general framework for priorities compliance, future orders issued by the division will merely cite Regulation No. 1 and will not repeat the full text of the requirements. However, specific provisions of any existing or future order issued by the Director of Priorities will control when in conflict with the general provisions of the regulation, OPM explained.

Salesmen Get the Cigars at Alter's 'Man Bites Dog' Party

Officials of Parts Wholesaling Firm Even Serve Part of Dinner at 'Turnabout Affair'



(Left) These are scenes from the "Man-Bites-Dog" party at which the Harry Alter Co., refrigeration supplies distributing firm, entertained its suppliers at a party at the Palmer House in Chicago. In this picture H. Jensen of Rotary Seal folds his hands over a stomach well filled from the meal dished out by the Alters as Charlie Muller of the same company points a



finger of shame for John Spicer of National Ammonia. W. W. Meyer of Rotary looks on with amazement as Hal MacPherson of Electrimatic is all ready to dig into a second helping with forks in both hands. (Right) something deep cooking here in this conference between Charlie Benson of Imperial Brass (left) and Bill Keefe of Fedders Mfg. Co.



(Left) Pitching into the banquet around the table from left to right are Joe Krall, Detroit Lubricator; J. N. Ott, Henry Valve Co.; Marc Shantz, manufacturers' representative; Phil Redeker, AIR CONDITIONING & REFRIGERATION NEWS; and Bill Keefe. Standing is host Harry Alter. (Right) The Alter boys—Irving, Harry, and Leo—who conceived the idea of the party because of these strange times when buyers are soliciting sellers. In a mimeographed note placed on a table they declared: "Our buyers have just com-



(Left)—And here it is—"cigars for salesmen." Recipients are Joe Coyne, Henry Valve Co.; Don Tmey, Automatic Products Co.; Jim Hood, Ansul Chemical Co.; and Earl Vallee, Automatic Products Co. As the dinner

started, all officials of the Alter Co. present donned waiter's coats and helped to serve the first course. (Right) Very happy about this are Irving Ralph, American Brass Co.; and R. Noseck, Jarrow Mfg. Co.



Dunlop of Ranco, Jim Hood of Ansul, and Bill Keefe of Fedders. (Right) "Some party" agree Charlie Muller and H. Jensen of Rotary Seal Co.

SERVEL Interchangeability SOLVES YOUR PARTS PROBLEM

This \$10 kit gives you all the parts you need to render field service on all Servel models from 1/5 to 10 HP. Write for details. Servel, Inc., Electric Refrigeration & Air Conditioning Division, Evansville, Ind.



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THE "COURT OF LAST APPEAL" IN PRODUCT COMPARISONS

When comparing refrigerating equipment and component parts...let Scientific Test supply the unbiased facts. Science is impartial...impersonal...truthful! The facts it supplies lead to improved manufacturing methods...better raw material buying...more productive selling and advertising. Let us make your product comparisons on a scientific basis!

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PENN BRASS & COPPER CO., INC.
POWELL AVE., ERIE, PENNA.

Dayton Hotel Will Save \$10,000 Annually With New Refrigeration Plant; Enough To Pay For System Within One Year

DAYTON, Ohio—Modern refrigerating machinery, replacing a 125-hp. CO₂ brine cooling system, will save the Miami hotel here an estimated \$10,000 a year, chiefly in reduced power costs, enough to pay for the new 20-hp. Airtemp low pressure installation in a single year.

"This is the best single improvement I have seen installed in any hotel in my 20 years of experience," exclaimed Edward Hunt, resident manager of the hotel, following examination of utility company records revealing the power savings.

SERVICE UNINTERRUPTED

Hughes Heating & Ventilating Co., installer, was faced with the problem of keeping all refrigerators in the hotel in full operation while installing the new machinery and changing over from the brine system. Brine coils were left in service until the new coils had been installed and connected to the compressor, permitting uninterrupted refrigeration for the hotel. While the new coils were being installed the old refrigerators were cleaned, painted, and overhauled.

The old CO₂ system employed two compressors, one 75 hp. and one 50 hp., together with approximately 10 hp. of auxiliary motors for pumps. Because the system had been operating for many years its efficiency was low. It was necessary to keep one of the large compressors in operation all the time, and both units operating under peak load conditions. A large condenser was supplied with cooling water from a well located in the basement of the building, and the pumping expense was considerable.

BRINE SYSTEM

The machines cooled brine in a tank measuring 20 ft. x 10 ft. x 10 ft. and the brine was pumped through insulated pipes to a series of walk-in and reach-in refrigerators located in several sections of the hotel. The compressors and brine tank occupied a large machine room in the basement, which the hotel needed for other purposes.

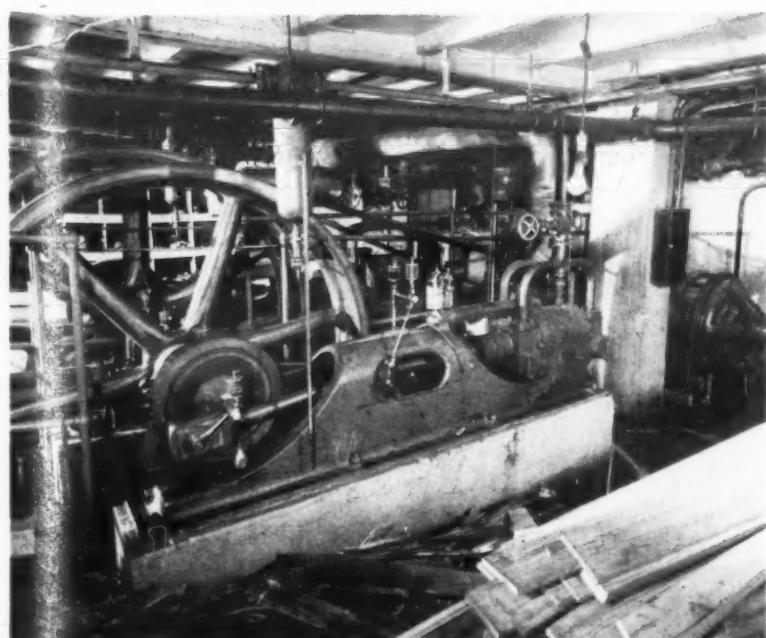
Refrigerating capacity was provided to manufacture 3,000 lbs. of ice every 24 hours, but because of the condition of the system it was necessary for the hotel to purchase an additional \$250 worth of ice each month from a local ice company to meet its demands.

WHAT NEW PLANT DOES

The new installation supplies refrigeration for three 1,000 lb. ice makers; two units operated by a 5-hp. sealed refrigerating machine; the third unit powered by a 3-hp. compressor of the same type. Ice purchased outside the hotel had cost \$3 a ton; the new system manufactures the required quantity of ice for \$1.32 a ton.

Drinking water for all public rooms and some 300 guest rooms is now provided by a Day-Night shell and coil water cooler having adequate

Old System Was Inefficient



Old and inefficient, these two big CO₂ compressors operating a brine system in the Miami hotel were costly to operate, unable to meet the present-day demands put on them, and took up a lot of room.

Compactness In New Hotel Plant



Inspecting one of the new compact Airtemp refrigeration units that enables the Miami hotel to save \$10,000 a year on refrigeration costs is C. H. Hageman, engineer for the hotel.

During 1939 B. E. Nydham, traveling engineer for the Pick Hotels came to Dayton to inspect the Miami operation. Mr. Jamison recommended to Mr. Nydham that new refrigeration equipment be installed and from that time until September, 1940 both men studied equipment applications and perfected plans to replace the Miami machinery.

\$10,000 SAVED YEARLY

In estimating the savings provided by the new system, W. K. Jamison, engineer for Hughes Heating & Ventilating, figures the hotel has at least a net reduction in weekly electric costs of \$116, possibly more because the hotel has a higher percentage of occupancy and is serving more meals than last year, making comparison with 1940 figures difficult. This power saving, equal to about \$7,000 yearly, added to the \$250 saved each month through not having to buy additional ice, totals approximately \$10,000 a year.

Because the new Airtemp system was installed in unused storage space having a low ceiling, it released the engine room, measuring 40 x 40 x 14 feet, for use as a needed work shop.

Fully automatic in operation, the new refrigeration system requires much less supervision than the old machines, which were inspected frequently and charged with refrigerant daily.

DEFROSTING IS AUTOMATIC

Time clocks operating solenoid valves were installed to provide automatic defrosting of the coils in some boxes which receive heavy use both day and night.

Several years ago Mr. Jamison made a survey of the refrigeration system in the Miami hotel, and recommended that it be replaced with modern equipment. Estimates indicated that savings of from \$5,000 to \$10,000 per year could be made by a reduction of power costs, ice expense, and supervision.

This is my buying guide for trouble-free motor controls

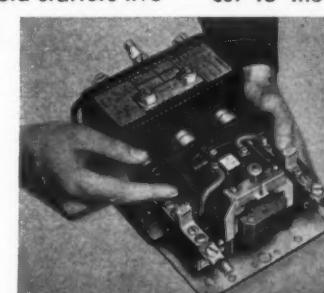
I used to fuss around with all kinds of controls, but I have standardized on the Allen-Bradley line . . . and here are my reasons:

I find that Allen-Bradley solenoid starters live up to their advertised claims. For instance, there is no contact maintenance. The silver alloy contacts never need any cleaning, filing, or dressing. They last practically forever in air conditioning and refrigeration service.

Another thing: These solenoid starters have no bearings, pins, or pivots to corrode or stick.

There are no copper contacts to overheat, if not cleaned regularly, and there are no flexible jumpers to break. Our "free-service" calls are cut to the minimum. Our men like the roomy cabinets, the handy knockouts, and the white interiors.

Finally, the "soldered-ratchet" overload relays don't lose their accuracy with age. They trip on the dot every time. I'd advise you to use the Allen-Bradley catalog as your buying guide for electric motor controls. Why not send for one today?



There is only one moving part in the Allen-Bradley solenoid starter.



Allen-Bradley Company, 1313 S. First St., Milwaukee

ALLEN-BRADLEY

Servel 9-Month Net Tops \$2 1-4 Million

EVANSVILLE, Ind.—For the nine months ended on July 31, Servel, Inc., reports a net profit of \$2,348,058, after federal income taxes and other deductions, equal to \$1.31 a share on 1,781,426 common shares. This compares with \$2,285,554, or \$1.28 a common share, earned in the corresponding period of 1940.

The company showed a net profit of \$1,432,298, or 80 cents a share, for the three months ended on July 31. In the preceding three months, the net was \$646,057, or 36 cents a share, while the profit for the July quarter a year ago was \$1,238,498, which was equal to 69 cents a common share.

Fiscal year of the company ends on Oct. 31.

Fort Jackson Installs 517 Refrigerators

COLUMBIA, S. C.—T. Louis Murray, commercial refrigeration firm here, is installing 517 refrigerators in the mess hall kitchens at Fort Jackson.

Fifty refrigeration engineers under the direction of W. P. Sherman, refrigeration engineer and member of the Murray firm, will be employed to complete the installation. The order is being handled without interference with the firm's regular business.

U. S. Will Install Refrigerators In Defense Housing Units If That Is 'Local Custom'

WASHINGTON, D. C.—After several months of study and deliberation the Federal Works Administrator has fixed upon a policy concerning the installation of refrigerators in defense housing units.

Electric refrigerators will be provided by the government in those areas where it is the local practice or custom to include them with rented houses. Where it is not the practice the government will not install refrigerators or other electrical equipment. In these areas the government will lend assistance to dealers in lining up prospects among defense housing tenants.

Dealers are advised by the Federal Works Agency to contact the housing manager for the local project concerning equipment. The managers have been instructed not only to inform dealers as to whether refrigerators will be installed in the units but to provide them with data on prospective tenants. Managers will inform dealers as to whether tenants are bringing in their own boxes.

All housing units built for the

Army carry a blanket authorization for refrigerators and ranges. The War Department advised the Federal Works Agency to equip these units, because it is not the practice of commissioned and non-commissioned personnel of the Army to carry this equipment when moving from post to post.

To date 25,000 refrigerators have been purchased by the government for defense housing units. The housing score to date is: 16,949 units occupied or ready, 59,160 units under contract, and 88,540 approved to date. Under the last defense housing appropriation bill for \$150,000,000 it was provided that the Federal Works Administrator install movable equipment within his discretion. The position now taken by the administrator is that such equipment will be provided by the government where justified by local practice.

Federal Works Agency officials feel that although the question of priorities on refrigerators and ranges for defense housing units has not yet come up, they may have to deal with this problem very soon.

G-E Substitutes Materials In Roasters

BRIDGEPORT, Conn.—Changes in materials used in General Electric roasters and utensils and in accessories for electric ranges, conforming with the request by OPM to conserve aluminum, have been made by the G-E appliance department.

Beginning with mid-summer production, the smaller of the two G-E roaster models was supplied with glass utensils only, and is equipped with a black enamel lid. The larger roaster is henceforth to be equipped with a white enamel lid, but will continue to be available with a choice of glass, pottery, or enamel utensils.

On the "C" line of ranges the single wall aluminum outer shell of the thrift cooker is being replaced with a double-walled shell, the inner wall finished in ground coat porcelain enamel and the outer shell of heavily tinned steel.

There have been numerous requests in the past for a cooker pail not made of aluminum, and hence-

forth the 6-quart pail on these ranges will be made of porcelain enamel, with the lid, top flange, and interior finished in white. Special porcelain will be used in the pail which is said to be free from lead, arsenic, antimony, and other materials that might be injurious to foods cooked in the utensil. The exterior of the pail will be black porcelain enamel, and the handles on the pail and lid will be of material similar to the cooker lid.

On the "D" line of ranges, the "economizer" sheet has been changed from aluminum to porcelain enameled steel, which is easy to clean and matches the oven interior. There will be no changes at present in the cooker of this line. Although the use of new materials represents increased costs, there will be no increase in range prices at the present time, it was announced by E. C. Dvorak, sales manager for ranges.

Defense Sub-contracts Plan Holds Hope For Small Manufacturer

NEW YORK CITY—Many small consumer-goods manufacturers faced with extinction because of the national defense program will be enabled to continue in business through a program now being shaped up by the Defense Contract Service, headed by Robert L. Mehornay, it is predicted by W. O. Crabtree, regional manager.

Establishment of the program has been facilitated by the recent "revolutionary" revision in the Army and Navy buying policies, making subcontracting an integral part of all orders. Mr. Crabtree said this change will permit the Defense Contract Service to concentrate on getting facilities for the "bits and pieces" program, rather than on selling contractors on the subcontracting idea.

'KEY' SUBCONTRACTORS

The DCS's program involves roughly increased emphasis on "key" subcontractors, who in some respects are capable of being prime contractors; a relaxation of tolerances; a coalition of the stronger concerns in each community to survey and assist the smaller companies; and subcontracting of civilian goods by large companies manufacturing both defense and consumer goods so as to free more equipment for defense work.

It is planned to ask "key" subcontractors to develop 20 or 30 small concerns as sources of supply on defense work. These subcontractors would give the small firms management help, find necessary equipment, and enable them to convert their plants.

The Army and Navy have frequently approved changes in material specifications in the past and, it is pointed out, the time has arrived when some relaxations in tolerances will have to be adopted. The DCS has suggested the channeling of orders through several small subcontractors, so that, for instance, one does the rough stamping, shaping, or molding, and the second and third plants the finer precision work for which the first is not equipped.

HOPE FOR EXTENSION

The DCS hopes to see an extension of the plan of one company which is already subcontracting certain types of electrical equipment for civilian use. Although it is recognized that prime contractors do not relish building up future competition, it is felt that larger concerns are better equipped to convert their civilian goods plants to defense work than smaller concerns and that the latter should turn out civilian goods and the former defense work.

Mr. Crabtree said he hoped the program would double the 10 to 20% of small concerns in industries even remotely connected with defense work that can with assistance be employed on this work.

CIO Frigidaire Workers Rap 'Arbitrary Curtailment' of Refrigerator Production

DAYTON, Ohio—Protest against "arbitrary curtailment" of household refrigerator production has been sounded by the CIO affiliate representing workers in Frigidaire's plants here.

A formal statement issued by Local 801, United Electrical, Radio & Machine Workers of America declares:

"The management of Frigidaire division of General Motors with which our union has a contract covering wages, hours, and working conditions for 11,000 of its employees called the union committee into a meeting and read to it a letter from OPACS relative to a curtailment in the production of refrigerators.

"This curtailment order will cause thousands of Daytonian breadwinners to lose their present employment with no prospect of immediate employment elsewhere.

"We realize the importance of and are in sympathy with the efforts of our Administration to prepare adequately its national defenses in this most important fight against Hitlerism, and in whose name this curtailment has been ordered.

"We, as American workingmen, want to do all in our power to aid in this endeavor.

"But, though the OPACS supposedly asserts that this arbitrary reduction is ordered in the interests of national defense, both the local Frigidaire management and our union as well as other agencies in the defense program are in agreement that the reduced refrigerator production should be replaced with defense production, that as a portion of the plant is made available to defense production the employees formerly making refrigerators can be shifted to this defense production

without loss of time or income. Such a planned program, we believe, would be in accord with the interests of labor, industry, and national defense.

"A new army of unemployed is a poor weapon against fascism. This we are anxious to avoid.

"We are placing before the national administration a program which includes the following:

"Opposition to arbitrary reduction in production of consumer goods, including washing machines, refrigerators, radios, home appliances, etc.

"Before any reductions are instituted, the government must give to those companies affected enough primary contracts and sub-contracts to take up the slack.

"If, in spite of these steps, workers are nevertheless laid off, then such workers must get first claim on jobs with other companies in the community which are working on government contracts.

"If nothing is done about this threatened layoff, serious economic consequences will result. We, citizens and builders of this community, are determined that something must be done.

"We propose a practical program of immediate action: Write President Roosevelt, William Knudsen of OPM, Leon Henderson of OPACS, Senators Taft and Burton and Congressman Holbrook asking that they do what they can to rescind the curtailment order and explaining what it means to Dayton workingmen, local merchants and manufacturers, and the community's well being. All of us should be interested in this because all of us are affected. Therefore, we want you and those of you who are associated with us to cooperate with us in this endeavor."

Defense Requirements Close Maytag Plant

NEWTON, Iowa—Curtailments in washer production enforced by national defense requirements caused the closing of assembly lines in the factory of the Maytag Co. here for almost a week. Lines were closed from Wednesday of one week to the following Tuesday, and affected 225 employees of the company.

Terminating their action as a "necessary temporary measure in compliance with the general purposes of the OPACS program, pending final determination by them of the nature and extent of the reduction," company officials added that they were trying to convince government heads that no arbitrary reduction program be put into effect until enough defense work has been given the industry to assure regular work for employees.

At present, Maytag is working on several small jobs in connection with defense work.

Radio Industry Given Nickel By OPM For Use In Speakers

WASHINGTON, D. C.—Special allocations of nickel for permanent magnet speakers have been granted by the Priorities Division of the Office of Production Management to the radio industry, to match the previous aluminum allocations for magnets. Beginning with a July quota, the allocations will extend through December.

Further conferences between representatives of Radio Manufacturers Association and OPM officials are scheduled for the coming weeks regarding additional nickel allocations for tubes and volume controls.

For July, OPM allocated 18,340 lbs. of nickel, including about 25% prime nickel and 75% secondary scrap, for permanent magnets. This is about half of the monthly average required during 1940. August allocation was 16,822 lbs., with gradual decreases forecast until December, when the allocation for that month will be about half the July quota. However, allocations will be increased if more nickel becomes available.

All allocations are based on 1940 sales of permanent magnet and loud speaker manufacturers, and on their proportionate deliveries to radio set manufacturers, all of which will be maintained under the existing arrangement. Magnet manufacturers must make monthly reports to OPM, and can use the allocated nickel only for radio speaker magnets.

Sylphon Thermostat Assemblies

• Known Quality to
Leading Refrigerator and
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THE FULTON SYLPHON COMPANY, KNOXVILLE, TENN.



Anaconda Copper Refrigeration Tubes for difficult jobs



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Separate "On and Off" Knobs • Universal Range • Capillary Pressure Connections • Fewer Models to Stock • Cooling Control on Cut Out or Cut In • No Short Cycling • Minimum Free Service • Polartron Equipped Compressors can be Converted to Produce Frost-Free Constant Cold

MINNEAPOLIS-HONEYWELL REGULATOR COMPANY, 2807 FOURTH AVENUE SOUTH, MINNEAPOLIS, MINN.

MINNEAPOLIS-HONEYWELL AUTOMATIC CONTROLS

REFRIGERATION Control

Frozen Foods Made Air Conditioning To Greatest Strides In Years Since 1936

CINCINNATI—The morale of the nation, so important in the present emergency, depends largely upon continued progress within the food industry, Edwin T. Gibson, president of Frosted Foods Sales Co. of New York, declared in addressing the recent fortieth annual meeting of the International Stewards & Caterers Association here.

"It is fortunate that so much has been done already in these past 10 years to achieve more perfect ways of raising, packing, and distributing quick-frozen foods," he said.

He continued by remarking that years of laboratory work had proved the importance to good health of vitamins and minerals preserved in foods by quick freezing, and pointed out how important the vastly smaller space requirements of quick-frozen products may become in the event of a shortage in transportation and storage facilities through the national defense emergency.

Mr. Gibson invited his listeners to examine the record of the frosted foods industry as an indication of progress that might be expected in the future.

"When looking at the wide uses to which frosted foods are put today," he said, "it is difficult to reconstruct the initial period of progress achieved in 1931. At that time, there were 36 stores selling frosted foods. Sales resistance against a new untried product and consumer misunderstanding of the miracle of quick freezing were obstacles in the path of progress.

"At the end of three years of stubborn work, those frosted foods outlets were boosted in number to 351 stores. In 1936, 1,200 stores were handling "Birds Eye" foods—and, for the first time, other frosted foods producers entered the field."

Crediting chefs, stewards, and restaurant managers with an early acceptance of the flavor and nutritional values of frosted foods, which are now distributed through wholesalers in every section of the country and in from 18,000 to 19,000 stores, Mr. Gibson told members of the association that there is a close relationship between their job and that of the frosted foods industry.

"We must supply foods as fresh, as nutritious, as appetizing as possible," he declared. "Our supply of foods must be uniformly the best."

"I believe, further, that on each of these three counts, the frosted foods industry offers you opportunity for further advance within your own profession."

Holding Charge Reduced In Mills Compressors

CHICAGO—Due to requirements of the national defense program, Mills Novelty Co. has found it necessary to reduce the amount of refrigerant holding charge in its condensing units. The new quantities will be in accordance with the specifications set forth in the company's latest catalog.

Accordingly, all condensing units shipped after Sept. 1 will be furnished with the new refrigerant holding charge. This will apply to all unfilled orders on hand at that time, as well as to all future orders.

Edward B. McClelland Heart Disease Victim

BLOOMFIELD, N. J.—Edward B. McClelland, 48, assistant sales manager of the air conditioning and refrigeration department of General Electric Co., died of heart disease Aug. 24 in Portland, Ore. Suffering from a heart attack while on a business trip two months ago, Mr. McClelland had been confined to a hospital in Portland.

After serving in the United States Marines during the World War, Mr. McClelland was employed briefly by the Pictorial Review Co. in New York and then joined Philip H. Harrison Co., Newark, N. J., G-E distributor. He joined General Electric in 1932, became western district manager for the department with offices in Chicago in 1934, and came to Bloomfield in 1939.

Rivet Cooler Permits Boost Output of Arizona Copper

SUPERIOR, Ariz.—In order to increase America's supply of copper urgently needed in national defense work, Magma Copper Co. has just installed three new 140-ton Carrier centrifugal machines to provide air conditioning down to the 4,600-foot levels of its mine here.

This constitutes the third extension to the original air conditioning system, which was designed and engineered by Willis H. Carrier in 1937. At that time the Magma mine was the first mechanically air conditioned mine in the United States.

Unusually high rock temperatures have made air conditioning necessary in the Magma mine. Temperatures range from 127° F. on the 3,200-foot level to 150° F. on the 4,600-foot level. This new installation is expected to cut temperatures down to 90° at the deepest workings.

Two Carrier centrifugal refrigeration units, supplying cooling equivalent to the melting of 560,000 lbs. of ice every 24 hours, were used in the first installation. One cooled the air for the 3,400-foot level and the other for the 3,600-foot level. Each unit is designed to cool air 10° at the rate of 30,000 c.f.m.

In November 1939 a third unit was installed and located on the 4,000-foot level. One of the three new centrifugal machines will be placed on this level. The other two will be put in operation on the 4,200 and 4,400-foot levels, the latter machine supplying refrigeration to the 4,600-foot depth.

Additions to the present system make the air conditioning system in the Magma mine the largest mine installation in North or South America. The six units, doubling the previous system, boast a total capacity of 840 tons, equal to the melting of 1,680,000 lbs. of ice daily.

The installation was supervised by C. B. Foraker, safety and ventilation engineer for Magma Copper Co.

Cellular Rubber's Use as Insulation May Get Trial

NEW YORK CITY—Although now being produced by the United States Rubber Co. in considerable volume for defense needs, further development for peacetime use is predicted for a new material known as cellular rubber, which is claimed to be half the weight of cork and an ideal material for heat insulation. The new product resembles ordinary sponge rubber but is different in both structure and properties.

"Sponge rubber," the company explains, "is formed of cells which communicate and thus is easily penetrated by water and useful in sopping up water. Cellular rubber is formed of cells completely walled off from each other, each cell containing a tiny bubble of gas. It is therefore water-resistant and useful in flotation devices.

"One of the first defense uses of the new material is in life-saving jackets. Tests show that cellular rubber is 10 times more resistant to water than cork or balsa wood and never will absorb enough water to cause it to sink. Because of this advantage, much experimental work is being done with cellular rubber in other flotation apparatus, including pontoon bridges and life rafts.

"Other properties, in addition to light weight and moisture resistance, attributed to the new type of rubber are low heat conductivity, rot proof, oil, acid, and fire resistance, structural strength, long life, resistance to vermin and termites, and good workability. These characteristics, it is asserted, make it an ideal material for heat insulation. It is being used for this purpose under the decks of mosquito-type torpedo boats. Its most popular use to date has been as supports for self-sealing gas tanks in airplanes, where the requirements are for a very light material with good structural strength.

"Because of defense requirements, peacetime use to date has been limited to small installations for insulation purposes."

Rivet Cooler Permits Overnight Storage

LONDON, Ont., Canada—Because aluminum alloys, specially heat treated for use in airplane construction, "age harden" rapidly in room temperature, becoming difficult if not impossible to work, the new rivet cooler designed by Kelvinator of Canada is helping the dominion speed its production of war planes.

The two principal alloys used contain about 96% aluminum, plus magnesium and copper. To prevent cracking under severe working, it is necessary to treat the metal by heating to 920° to 930° F. After this treatment, however, the alloys must be formed rapidly or they will harden. If the alloys are refrigerated the age hardening will be retarded considerably.

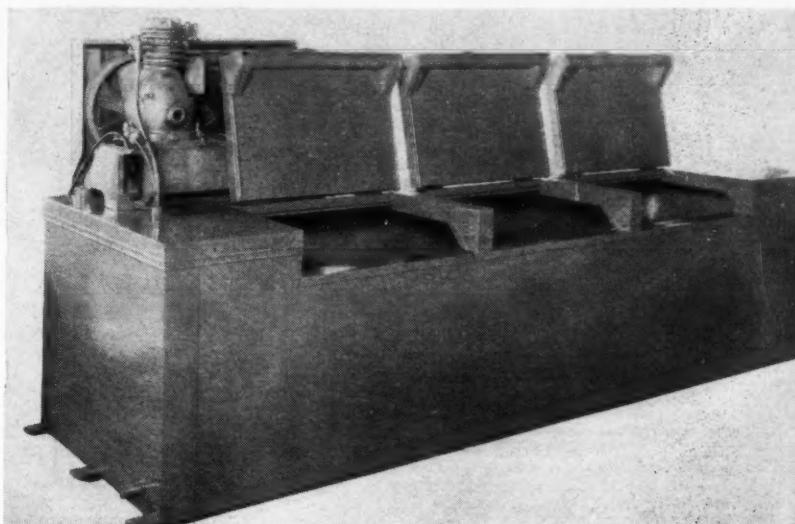
Packed in proper boxes, the heat treated material may be kept in condition for working for 24 hours by means of refrigeration. This storage method is especially valuable for rivets, which can be heat treated in fairly large quantities and held in cold storage until needed.

The rivet cooler resembles a bottle beverage cooler in appearance. It contains three compartments and is fitted with top-opening heavily insulated doors.

New Wisconsin Plant

JUNEAU, Wis.—Arno Kuhlman will erect a 300-unit locker plant here, to be completed about Oct. 15, in a building 24 by 46 feet.

Milk Cooler Used To Freeze Fowl at 0°F.



DELTA, Ohio—Standard Hatchery here is using a regular 14-gal. milk cooler made by Schultz Bros. Mfg. Co. for the freezing and storage of various types of fowl.

The Lipman 1-hp. condensing unit which is standard with this model is used for this particular application, with a lower setting of the cabinet.

'Leatherneck' Learns How To Service

BUFFALO—Trained to construct and repair the refrigeration equipment of marines in the tropics, Private Raymond R. Rose of Buffalo has been graduated from the Marine Refrigeration School in Quantico, Va. He is home on furlough.

White-Rodgers model 1609 temperature control accomplishing the necessary lower temperatures.

The Schultz cabinet is constructed with copper cooling coils in the inner liner. Rock wool insulation and a special hinged type lid construction are other features of the cabinet.

Wolverine Tube Dividend Of 20 Cents Declared

DETROIT—A dividend of 20 cents per share on the \$2 par value common stock of Wolverine Tube Co., payable Sept. 30 to stockholders of record Sept. 16, was declared at the Aug. 26 meeting of the company's board of directors.

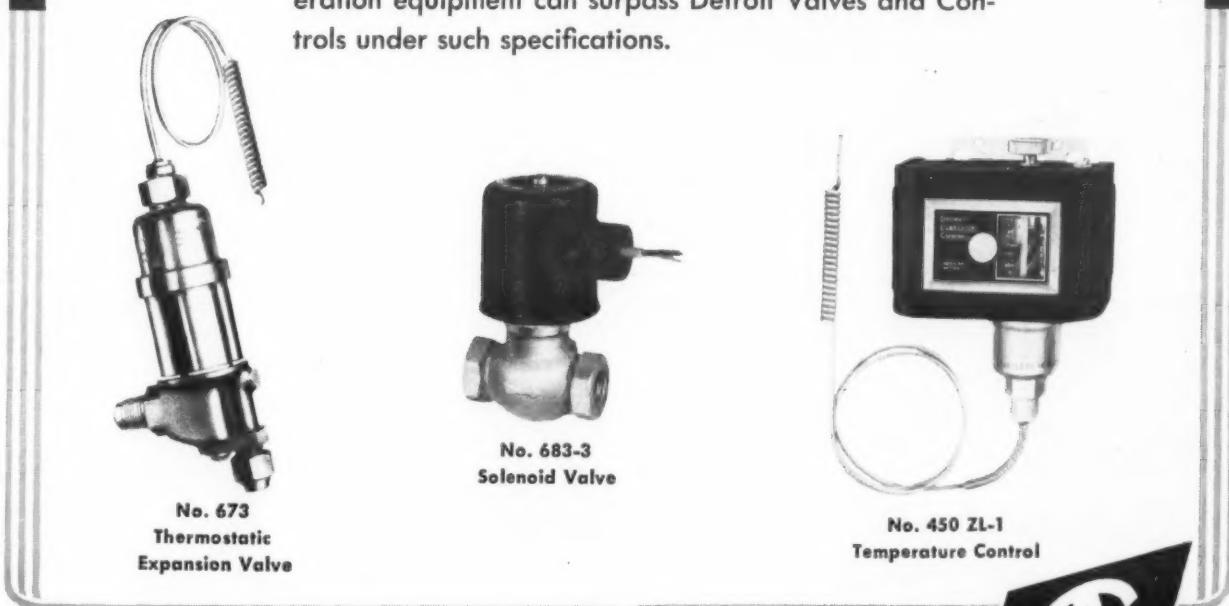
Conserve MAN-POWER AND MATERIALS

Defense production and the heavy drain on manpower for the Army are two very important factors to consider in laying out refrigeration and air conditioning installations.

Such installations must function with a minimum of service, for capable service men will be fewer as the Army grows.

Replacement of ineffective equipment throws an unnecessary added load on production machines needed for turning out military supplies.

It is therefore a patriotic duty to choose refrigeration valves, controls and accessories which have proven their dependability, effectiveness and long service. No refrigeration equipment can surpass Detroit Valves and Controls under such specifications.



DETROIT LUBRICATOR COMPANY

General Offices: DETROIT, MICHIGAN

Canadian Representatives—RAILWAY AND ENGINEERING SPECIALTIES LIMITED, Montreal, Toronto, Winnipeg



Air Conditioning & REFRIGERATION NEWS

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F. M. COCKRELL, Founder

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Refrigeration Is Essential To America's Health

Let's Get Together

HIGH priority rating has just been granted to farm machinery. In recent weeks, such blanket ratings have been given to dairy machinery and equipment, optical goods, and surgical instruments.

Value of such products cannot be denied. But we do say without hesitation that none of them is more valuable to national health and welfare than refrigeration equipment.

No, not even surgical supplies. Refrigeration prevents ill health. Note: Did you see the story on the front page of last week's AIR CONDITIONING & REFRIGERATION NEWS, about the tragic results of the failure of a Japanese refrigeration system? "It can happen here, too."

And as for farm machinery, well, the last we heard, the government was still paying the farmers not to produce as much as they could with the equipment they already have.

What's the answer? Why does farm machinery get blanket A-10 and B-1 priorities? Because the farm bloc is united, and because the farmers know how to lobby.

The refrigeration industry has been much too busy during the last decade or so to learn what this lobbying business is all about. But now we have to learn, and fast!

Refrigeration is vital to America's health.

Who Says It's Unhealthy?

IT seems one can't look at a Washington dateline any more without experiencing an involuntary shudder. Not only are they dealing this industry body blow after body blow, but they're attacking us in print, as well.

A fortnight ago Harriet Elliott of the Consumers Division, OPACS,

pleaded with American housewives not to buy electric refrigerators. Now comes an item in Pearson & Allen's "Washington Merry-Go-Round" which reads:

"White House Physician Dr. Ross McIntyre has forbidden Presidential Secretary Marvin McIntyre to remain around the White House much of the time while the air-cooling is on. . . . A lot of Washington bigwigs find air-cooling unhealthy."

The air conditioning system in the White House, we are unhappy to testify, is poorly operated. The reception room is as clammy as air conditioned Pullman cars were at first. President Roosevelt never employs air conditioning in his office which, in the summer time, has large windows open, looking out upon the spacious White House lawn.

Here is a public relations job for the air conditioning industry. Lest air conditioning get more "black eyes" from the nation's capital, experts should study the White House job and re-engineer it. Perhaps even the President, who looks down his nose at the "horse and buggy days," might be induced to sample the modern comforts and healthful atmosphere of a properly air conditioned room.

Anyone who says air conditioning is "unhealthy" is either the victim of a poorly designed installation, or else he doesn't know what he's talking about.

QUOTED

Stifling Small Business

(An Editorial)

FACTORIES are being shut down all over the country because the government refuses to permit them to have materials out of which to make goods for their customers. Leon Henderson recently asserted that two million men will be thrown out of work shortly in the industries making durable goods for the general public. Other spokesmen for the defense organization place the reduction in the number of factory jobs at a far higher figure.

The most important material which little concerns throughout the country are being deprived of is steel. This is the key defense material, but also the basic stuff out of which most lasting articles for civilians are made. For months the steel companies have been filling orders at Washington's direction, and two weeks ago all steel was placed under priority.

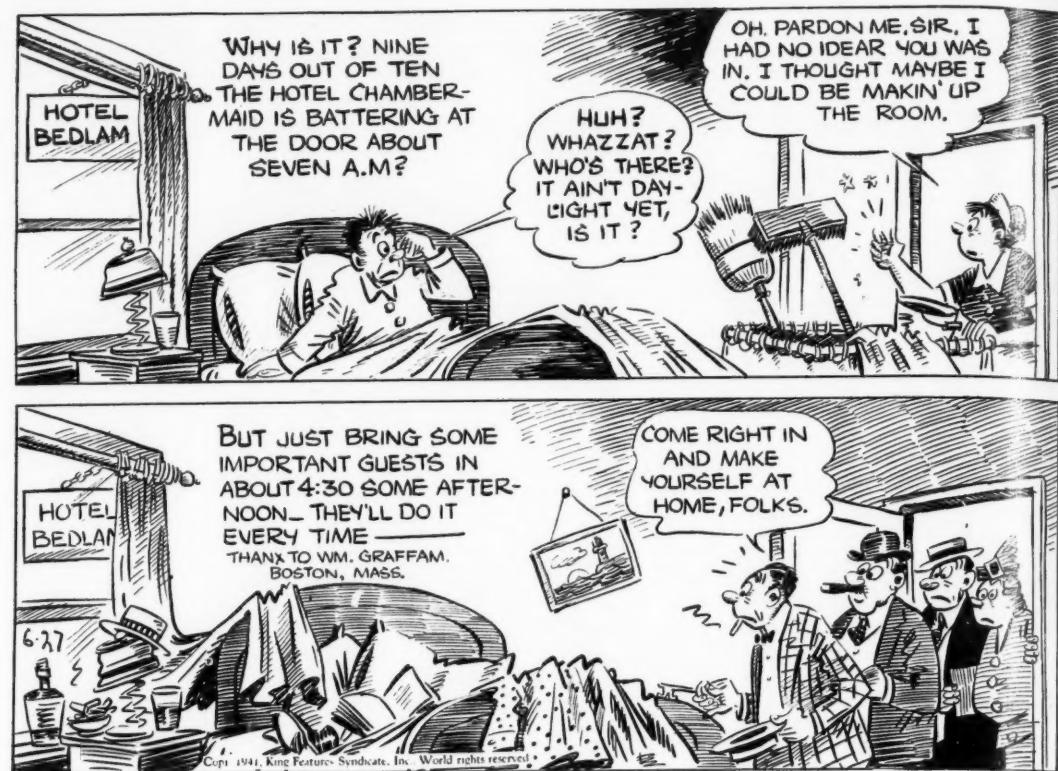
Where is the government using so much steel that it has to tell others they must do without it and close their plants? The first big use of steel in defense most people think of is for tanks. As late as 60 days ago, according to the study of Senator Byrd published in Tuesday's Tribune, only one medium tank had been delivered to the army. However, according to John Biggers, deputy administrator of OPM, medium tanks will eventually be produced at the great new Chrysler plant at the rate of 14 a day. Others have placed the output of medium tanks in 1942 at 300 per month or 3,600 in a year. These are 28-ton jobs, and a year's output would therefore weigh 100 thousand tons. Production of the light tanks for 1942 is scheduled for 400 per month. For 5,000 of these in a 10-ton size, 50 thousand tons of steel will be needed. No larger tanks are being constructed and there are no plans to start building them soon. One hundred and fifty thousand tons of steel will take care of the tank program at next year's rate of output.

The navy is a big user of steel. When the two-ocean navy plan was announced it was stated that 1½ million tons would be needed for the complete program. Some of that steel will not be required until 1945. But assume that all the steel for the twin navies is delivered in 1942—1½ million tons.

The merchant shipbuilding program will require steel. According to figures Senator Byrd obtained from Admiral Land of the maritime commission, merchant ships to be built this year will aggregate 577 thousand tons. Adding in the 27 tankers to be constructed this year will bring the total up to considerably less than a million. Assume that this is trebled next year and that 3 million tons of ships are built and that

They'll Do It Every Time

By Jimmy Hatlo



much steel is required.

On airplanes the use of steel is negligible. Lighter metals are employed exclusively.

Arms and ammunition remains to be considered. Output of Garand rifles is less than 25,000 per month. If a million are manufactured in 1942, about 10 million pounds of steel, or 5,000 tons, will be needed. About 1,500 tons of steel will provide for all the machine guns planned for production next year.

The program calls for adding nearly 2,000 of the 105 mm. howitzers. This will require about 8,000 tons of metal. Two thousand tons will provide amply for the 155s planned for. The other smaller guns will consume not to exceed 5,000 tons of steel. The total for weapons runs to 20,000 tons.

To get an outside figure on ammunition requirements it might be assumed that each gun fires the equivalent to its weight in a day. Making that assumption for all the guns which can possibly be produced next year, and assuming that all guns are kept firing for six months of the year, and that steel makes up half of each shell, the steel required for ammunition would be one million 800 thousand tons.

To summarize, the steel needs for arms in 1942 are as follows:

Tanks	150,000 tons
Navy	1,500,000 tons
Merchant ships	3,000,000 tons
Weapons	20,000 tons
Ammunition	1,800,000 tons
Total	6,470,000 tons

Adding 50% for all unforeseen needs would bring the total to 10 million tons. And steel is now being produced at the rate of 90 million tons per year—nine times the largest possible amount the government could have any use for.

The bureau of research of OPM whose figures have been challenged as much too high have placed the outside estimate of defense requirements of steel in 1942 at 13.8 million tons. It is hard to see where that much material can possibly be used. But take that figure and add it on to the 10 million tons the British and the other lend-lease countries have indicated they would like to have in 1942 and you get a total equal to about one-quarter of the steel output for this year. The amount remaining for civilian consumption would be 77 million tons, which is more than 25% more steel than was consumed in 1929. In the face of such plentiful supply the government has stopped the flow of the metal for civilian uses.

There is something queer about all of this priority. All the materials produced and procurable in this country are not by any means needed for the current manufacture of war implements. What is being taken away from small manufacturers is being piled up in great heaps somewhere. This artificial shortage will some day come back at us as a huge mountain of raw material which will either have to be destroyed or cause a shutdown of the heavy goods industries for a long period.—"Chicago Tribune," Aug. 22.

Although we have been subscribers to your publication for many years we would still be happy to have an additional copy of the July 16 issue of AIR CONDITIONING & REFRIGERATION NEWS due to the fact that it contains a complete report on the size and scope of the commercial refrigeration industry.

We are somewhat familiar with the plea that this industry presented to the OPACS and feel that this is one of the best selling jobs about which we have ever heard.

I take this opportunity of again expressing our appreciation and wishing your fine publication every success in the future.

PHILLIP H. CRUIKSHANK,
President and Treasurer

LETTERS

AIR CONDITIONING SPECIFICATIONS

Volkart Brothers, Inc.

60 Beaver St., New York, N. Y.

Editor:

Messrs. Volkart Brothers in Calcutta write us as follows: "We have received a copy from the AIR CONDITIONING & REFRIGERATION NEWS dated March 5, 1941, giving 1941

Specifications and comparative data of 184 models of household electric refrigerators offered by 21 companies. Please let us know whether they are publishing similar news giving comparative data on portable air conditioners, and if so, please send us six copies via our New York office."

Will you please give us the necessary information?

E. W. KUTIL

Answer: The April 9 issue of AIR CONDITIONING & REFRIGERATION NEWS gives specification data on all of the leading makes of portable air conditioners.

DENVER SERVICE FIRM

FOLLOWS YOUNGSTOWN PLAN

Refrigeration Maintenance Co.
1122 E. 17th Ave.
Denver

Editor:

We were very much surprised to see the favorable publicity in the Aug. 13 issue of AIR CONDITIONING & REFRIGERATION NEWS, concerning our company.

The news item was called to our attention by Roy Conrad of the Carrier Corp. for whom we take care of all service in this territory. We also have taken care of Hussmann-Ligonier's installations on many government jobs, and we also do business with Uniflow Mfg. Co. of Erie, Pa.

While we are comparatively a new service company in this territory, we feel that we are getting a very nice volume of the better accounts for having been in business a little over a year.

We have offered the commercial users in this region maintenance by the year, and have followed very closely the plan of the service company in Youngstown, Ohio, whose plan was given in detail in your publication some year and a half ago, and we can say that it has worked very successfully for us, in securing the most desirable accounts.

We have been readers of AIR CONDITIONING & REFRIGERATION NEWS intermittently over this period of a year and a half, and now we are enclosing our check so that we may be put on your regular subscribers' list, from now on.

If it is possible we would appreciate your sending us one copy of the Aug. 13, 1941 issue, at your earliest convenience.

Thanking you for the issues that we have occasionally picked up at McCombs Supply Co., and trusting that if we may be of any service you will call upon us at any time.

MELVERN G. REED

'ONE OF THE BEST SELLING JOBS WE'VE SEEN'

Tylac Co.
Greely and High Sts.
Monticello, Ill.

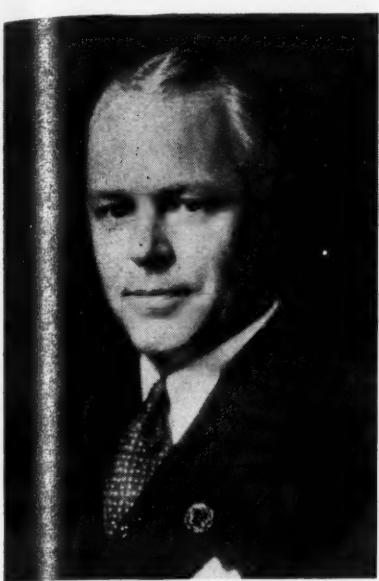
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Reeve To Manage Sales Of Easy Washers



W. HOMER REEVE

SYRACUSE, N. Y.—W. Homer Reeve, former Frigidaire sales executive and for the past two years acting sales manager of Easy Washing Machine Co., has been appointed sales manager of the company.

Easy plans to continue its program of advertising and merchandising, concentrating on the company's top quality models, despite the possibility of production curtailments, Mr. Reeve reports.

With sales and payrolls at record peaks and monthly orders exceeding production capacity by 40 to 50%, the company is allocating shipments to dealers on the basis of the dealers' previous performance records, current inventories, and the current retail movement of merchandise in each locality, according to Mr. Reeve.

The sales increases are the result of over-the-counter buying and are not due to advanced buying planned to offset future possibilities of curtailed manufacturing, Mr. Reeve said, pointing out that sales of the high-priced washers in the past three months have increased more than three times as much as the company's overall business.

Stephens Quits as Apex Advertising Chief

CLEVELAND—J. Fred Stephens resigned as advertising and sales promotion manager of Apex Rotarex Corp., effective Aug. 31, to accept an executive position with Shields, Harper Co., Oakland, Calif. distributor of service station equipment.

Mr. Stephens had been with Apex-Rotarex for 18 years, the last five as advertising and promotional manager in Cleveland and the balance of that time on the Pacific Coast. He has maintained his residence in California, and is returning there now for personal reasons. No successor has yet been named to his position with Apex.

Bell Refrigeration Moves To New Location

BALTIMORE—Bell Refrigeration Sales & Service, headed by Herbert R. Welkner, has moved into a new location at 15 East 21st St. The company formerly had showrooms and offices at 1918 Frederick Ave.

Dealer Hurt Fighting Fire

DILLON, S. C.—Everett Hall, General Electric dealer here, suffered painful but not serious burns on his feet while assisting in fighting a four-home blaze at Lake View, S. C. recently.

Gubb Elected Chairman Of Philco Board

PHILADELPHIA—Larry E. Gubb, former executive vice president, has been elected chairman of the board of Philco Corp. In other promotions, John Ballantyne, former treasurer, was elected vice president in charge of operations; Thomas A. Kennally, former general sales manager, was named vice president in charge of sales; W. R. Wilson, controller, succeeded Mr. Ballantyne as treasurer; and James H. Carmine, former assistant general sales manager, became general sales manager. James T. Buckley continues as president of the company.

Mr. Gubb has been associated with Philco since 1920, and was president of Philco Radio & Television Corp. when it became a subsidiary of Philco Corp. in 1940. Since that time he has been executive vice president.

Mr. Kennally has been general sales manager since 1939. In his new post he will be responsible for the merchandising of all Philco products.

Mr. Ballantyne, formerly treasurer of Philco Radio & Television Corp., has been Philco Corp.'s treasurer since 1940; Mr. Wilson has been with Philco since 1932, and controller since 1940; and Mr. Carmine has been assistant general sales manager since May, 1939.

Carolina Range Sales Soar In June

RALEIGH, N. C.—Sharp increases in sales of ranges and water heaters during June, as compared with the corresponding period of 1940, are reported by Carolina Power & Light Co. Range sales totaled 712, compared with 503 in June of 1940, while 264 water heaters were sold, as contrasted with 158.

Household electric refrigerator sales for the same period totaled 2,489, the figure for June of last year being 2,532. Sales of air conditioning units for this June stood at 13, as compared with 10 last June.

Tabulation of combined dealer-utility sales of major appliances for the two periods follows:

	June, 1941	June, 1940
Refrigerators	2,489	2,532
Ranges	712	503
Water Heaters	264	158
Air Conditioners	13	10
Washers	673	680
Dishwashers	3	3
Vacuum Cleaners	302	..
Radios	2,812	..

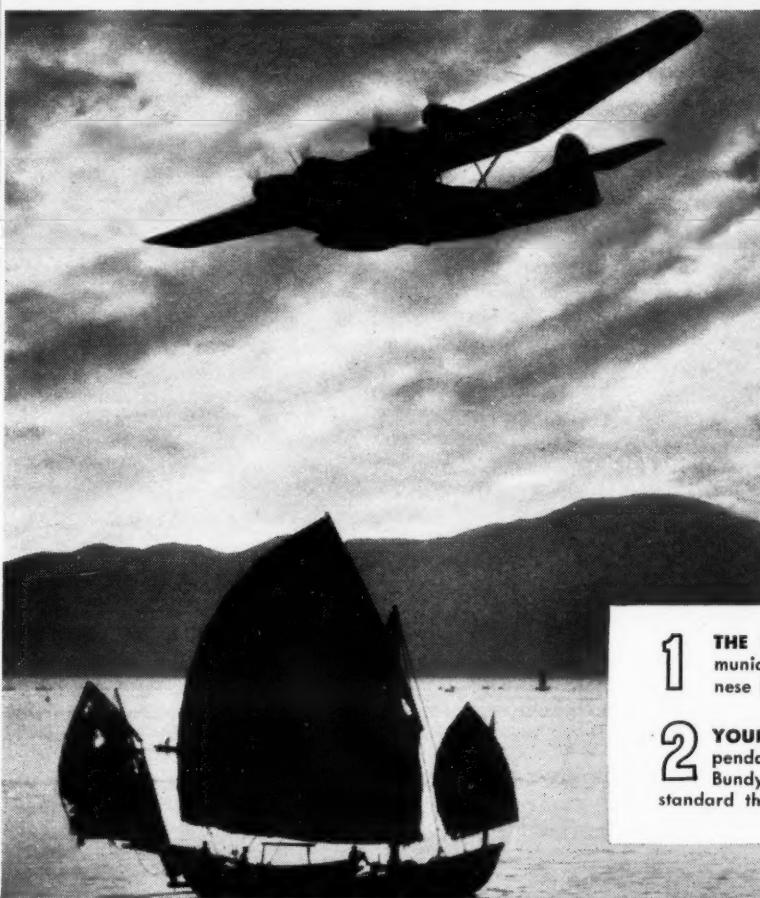
R. A. Crancer Moves Over To Schmoller & Mueller

OMAHA, Neb.—R. A. Crancer, formerly part owner and general manager of the C. A. Crancer Co. of Lincoln, one of Nebraska's pioneer refrigerator and appliance dealers, has disposed of his interests in that company and has joined the Schmoller & Mueller Co. here as sales promotion manager. Mr. Crancer also was formerly connected with Crancer's, Inc., of Wichita, Kan., and Omaha.

Hal Mays Joins Staff of Simon Distributing

BALTIMORE—Hal H. Mays, formerly with William Cole Appliance & Service Co., Richmond, Va., has been appointed to the sales staff of the Baltimore branch of Simon Distributing Co., Hotpoint distributorship. He succeeds Kermit Crippen, who has announced plans to enter the retail refrigeration and appliance field.

FAMOUS LIFE LINES



1 THE CHINA CLIPPER, life line of rapid modern communication with the Orient, is here contrasted with a Chinese junk, slowest and oldest form of trans-Pacific travel.



2 YOUR REFRIGERATOR'S CONDENSER, life line of dependable food preservation, is more than likely made of Bundyweld Copper-coated Steel Tubing, which today is standard throughout the entire refrigeration industry.

Black Star

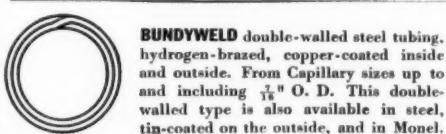
of the automotive industry for hydraulic brake lines, gas lines, oil lines, and many other tubing parts.

In fact, wherever fuel or lubricants or hydraulic pressure or refrigerants must be transmitted, through tubes within Bundy's range of sizes, you will more often than not find tubes by Bundy.

If you use tubing in your business, it will be well worth your while to get the complete story of Bundy tubing, which, depending upon your needs, is furnished either as completely fabricated parts, or in commercial lengths. Bundy Tubing Company, Detroit.

BUNDY TUBING

ENGINEERED TO YOUR EXPECTATIONS



BUNDYWELD double-walled steel tubing, hydrogen-brazed, copper-coated inside and outside. From Capillary sizes up to and including $\frac{1}{8}$ " O. D. This double-walled type is also available in steel, tin-coated on the outside, and in Monel.



BUNDY ELECTRIC WELD steel tubing. Single-walled—butt welded—annealed. Also furnished tin-coated outside if desired. Available in sizes up to and including $\frac{1}{8}$ " O. D.



BUNDY "TRIPLE-PURPOSE" MONEL tubing. Double-walled, rolled from two strips, joints opposite, welded into a solid wall. Available in all Monel, Monel inside—steel outside, and Monel outside—steel inside. Sizes up to and including $\frac{1}{8}$ " O. D.

Railroad Salvage Co. Remodels Quarters

ASHEVILLE, N. C.—Railroad Salvage Co., Kelvinator and Westinghouse dealer here, has remodeled and enlarged its quarters, doubling both window and floor display space. Fluorescent lighting is used throughout.

Boyd Furniture Co. Builds New Store

WAYNESVILLE, N. C.—Boyd Furniture Co., Crosley refrigerator and Universal range dealer here, is building a new store located on the town's "main drag."

Stephenson Music Adds Mildred Owens To Staff

RALEIGH, N. C.—Miss Mildred Owens, a graduate of Eastern Carolina Teachers College, has joined the electrical division of Stephenson Music Co. here as home economist. The Stephenson firm handles Frigidaire appliances.

Weiner's Home Service Moves Into New Showroom

SPRING VALLEY, N. Y.—Weiner's Home Service, appliance dealership, has moved into new showroom and offices at 37 Lawrence St. here.

Ralph Kolb Joins Staff Of Norge Dealer

SUMTER, S. C.—Ralph Kolb recently became a salesman for Mr. Kirby's Norge dealership here.

Cain Music Established As Frigidaire Dealer

BRENTWOOD, Mo.—Cain Music & Appliance Co., 2236 North & South Road, is a new dealership for Frigidaire refrigerators and Maytag washers. William B. Cain is president of the company, which employs four salesmen and will handle a complete line of musical instruments, phonograph records, and radios in addition to appliances.

Bernhard's Dealership Adds 3 New Salesmen

RALEIGH, N. C.—Three new salesmen have been added to the staff of Bernhard's appliance dealership here. They are: A. C. McDuffie, formerly with Dixie Paint & Hardware Co., Fayetteville, N. C.; M. E. Carroll, formerly engaged in appliance selling in Miami; and W. M. Adams, who is well known in local circles.

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Wilmington, Delaware
or National Ammonia Division
Frankford P. O., Philadelphia, Pa.

SPECIFY
Virginia
REFRIGERANTS

VIRGINIA
SMELTING CO.
Located at tidewater
WEST NORFOLK, VA.

VIRGINIA

Air Conditioning Systems Make London Bomb Shelters More Livable & Permit Office Staff To Work Underground

By Chester B. Morrison, Manager, London Office, York Ice Machinery Corp.

Editor's Note: This is the second in a series of articles describing life in present-day London, where business is seldom "as usual." The author, Mr. Morrison, seems to thrive on trouble and war. Previously Shanghai manager for York, Mr. Morrison left war-torn China for war-torn London shortly after the European war began in 1939.

INCENDIARY BOMBS

For sometime after the night bombing started, only high explosives and time bombs were used, but incendiary bombs became more and more frequently employed. On the eventful night of Dec. 29, thousands of incendiary bombs were dropped on "The City of London," ("The City of London" means the financial district, used as we speak of the Wall Street district in New York).

On account of the unexpectedness of this attack and the lack of preparation, large areas of the city were entirely burned out. This was often due to the fact that buildings were locked without watchmen or guards and many fires started on roofs because it was impossible to approach and extinguish the bomb.

These incendiary bombs are easy to extinguish by use of sand or carbon dioxide, and as time went on people lost much of their fear of them, although they still continued to start many fires when they fell in inaccessible spots. Certain incendiary bombs were provided with a small explosive charge for the purpose of preventing the usual method of attacking the fire with sand.

AIR CONDITIONED AIR RAID SHELTERS

A certain portion of our business

before the war consisted in air conditioning. For sometime after the war started air conditioning was looked on as a luxury, and the people who had the authority to grant purchasing licenses would not consider air conditioning as a necessary form of industry. This condition changed somewhat as people were compelled to spend many hours a day in air raid shelters.

The government bureaus finally began to consider the possibility of applying air conditioning to underground offices, making it possible to spend the entire day in air conditioned shelters and thereby prevent many interruptions in the governmental routine. It is the opinion of our air conditioning salesmen that this type of equipment is being looked on more favorably because of the possibilities it holds out towards a combination of continuous office effort and a high degree of safety.

York has had plenty of experience in air conditioning windowless factories in America, built with the "blackout" possibility uppermost, and this idea has progressed in England to the point where we are actually beginning to install York air conditioning systems underground.

For instance, we are just now installing one air conditioning plant for the sole purpose of making an air raid shelter suitable for the entire office work of the organization installing it. It is needless to say that this is a very important organization, as otherwise a license for comfort air conditioning would not have been approved.

It is interesting to speculate at this time on what could be done along the lines of air conditioning underground offices and factories if the need had been foreseen a few years ago, or if time now permitted the construction of this type of office or factory. Such places could only be constructed now with difficulty because of the scarcity of both material and workmen.

In our own shop we have a staff reduced by army drafts and other conditions, and with this reduced staff we are fully occupied on direct refrigeration for national food supply, and it is unlikely that we could go into any large scale air conditioning even though the opportunities presented themselves. The other manufacturers of refrigerating machinery are just as fully occupied in normal refrigeration as we are.

For this reason, and due to inability to increase their staff or workmen, they also would not be in a position to air condition vast underground shelters. The idea does, however, warrant the expectation that air conditioning will be looked on more favorably after the war is over, and when new building construction becomes a matter for governmental promotion or control.

REFRIGERATION PRIORITY

After the war in Europe broke out, and particularly after the surrender of France, it became more and more evident that Great Britain would have to finance vast purchases of war materials in America. On account of American neutrality legislation, this would be impossible without paying cash for each transaction. It was inevitable that Britain's ability to purchase would be restricted by the amount of cash available, and as a consequence measures were taken to prevent the purchase of anything abroad that could be made or purchased in England.

This seriously affected our refrigeration business, and it was not until an acute shortage was realized in the supply of refrigerating machinery that we were able to secure the right to import York machinery from America. We have hoped that the passing of the lease-lend bill will make the granting of import licenses a little less difficult, and that we will be able to supply our share of the needed refrigerating machinery from now on.

Another reason for the restriction on the importation of refrigerating machinery or other machinery lies in the shortage of shipping space, due to the heavy losses incurred in the battle of the Atlantic. Not only is it difficult to secure shipping space for imported goods, but it is also

difficult to get deliveries of machinery after it has arrived in England. The railways, the highways, and the docks in England are all crowded, due to the greatly increased need for transportation facilities in connection with the war effort and to the conditions arising out of war-time necessities of distribution.

ARMY COLD STORAGE PLANTS

The efforts being made to assure the food supply of the country indicate that the British are preparing for a long war, if necessary, and many of the cold storage plants now ordered for military purposes for which we hold refrigeration contracts will not be ready for use before the end of 1941.

Provisions are made for the future and while the British, of course, hope to finish the war within a reasonable time, they are evidently prepared to stick it out for whatever time is necessary to accomplish the defeat of "Hitlerism."

PASSENGER TRAVEL—BRITAIN TO AMERICA

There are hundreds of Americans in London who would like an opportunity to visit America, and there are also many Americans who would like to return permanently to America because they no longer have sufficient business reasons to stay in England.

Due to the necessity for licenses to buy and sell and to the practical elimination of manufacturing and selling of goods not essential to national defense, there are many Americans whose business has been greatly reduced or actually wiped out, but who are unable to secure the necessary travel permits to leave England.

According to American legislation against travel on belligerent ships and since no neutral ships call at British ports, it is impossible for Americans to leave England, except by airplane to Lisbon. There are two air lines, both operated by the Imperial Airways, and they maintain a service to Lisbon amounting to three to six planes a week.

These planes will naturally accommodate only a small number of passengers, and there are so many officials and business people traveling on governmental missions that it is practically impossible for an American to get passage on one of these planes, if his traveling is for only ordinary business reasons. These Americans have individually and collectively requested our government to provide transportation for them, but so far without any success.

It is true that the U. S. government did send some ships about a year ago to the west coast of Ireland, and warned the Americans that no further ships would be available and that those who did not avail themselves of this opportunity to return would have to remain at their own risk. Many of those now wishing to return had very good business reasons for remaining at that time, but with their business wiped out either by bombing or sales restrictions, they now have excellent reasons for wishing to come back to America—but their voices are apparently not heard in official circles.

LISBON—ONLY NEUTRAL PORT

To those who have been fortunate enough to obtain passage to America, Lisbon has proven an interesting stopping place on their homeward journey. At the present time, arrivals at Lisbon must be provided immediately with transportation out of Portugal, as Portugal does not want any additional refugees in the city of Lisbon and other places in Portugal which are faced with the serious refugee problem.

These refugees fall into three general categories. There are refugees who have plenty of money which they managed to get out of their native country before financial restrictions were imposed. Many of these are unable to get out of Portugal because of passport regulations and quotas. Most of them wish to come to the United States.

There is a second group, composed of people of wealth who did not have an opportunity of bringing their wealth from their native land, and who, consequently, are a serious problem to the Portuguese who must in some way take care of them. There is a third class of refugees who have never had anything more than the merest means of livelihood, and who cannot get visas to the United States or elsewhere and who constitute a very serious problem to the Portuguese by virtue of their numbers.

SPIES

Scattered among the refugees are governmental agents seeking information for their respective governments. Spying in Lisbon is possibly not as prevalent as many romantically inclined writers imply, but there is no doubt more espionage in Lisbon in proportion to its size and population than any other city in the world. In places of this kind it is natural that gambling is prevalent in the casinos of Lisbon and the surrounding country seems to be in a flourishing condition.

It is interesting to note that British airplanes bringing passengers from London via the KLM Service land their passengers at the same airport where German planes arrive with their passengers from occupied France and Germany. It follows then that all land planes leaving for England must do so with the knowledge of German agents.

Many people wonder why these planes are not attacked enroute, and no answer seems to be available. The possibility always exists that these planes may be in danger.

(To Be Concluded)

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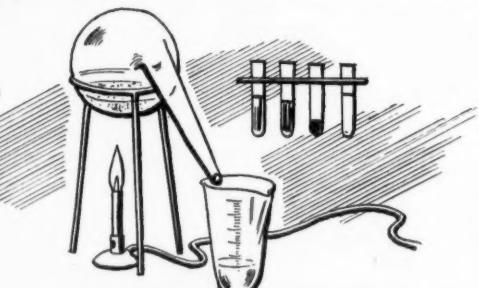
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Air Conditioning & REFRIGERATION NEWS

Have You \$2,000 To Invest?

Jobber Warns Against Starting Service Business With Insufficient Capital

By Jim McCallum

DAYTON, Ohio—"Don't try to start up your own refrigeration service business unless you have at least \$2,000 to \$2,500 to invest."

This may seem like a rather drastic warning, but nonetheless it is the hard-headed advice of J. L. Homan, head of Allied Parts Co. here. Mr. Homan, as a jobber of refrigeration parts and supplies, comes into daily contact with all types of service men, and is in an excellent position to be able to draw fairly objective conclusions as to what makes some service organizations succeed, others fail.

"Refrigeration service," states Mr. Homan, "is a business. And like any other business it needs capital. Lack of sufficient capital is one of the chief causes underlying the high rate of 'business mortality' among firms and individuals engaged in refrigeration service."

"Every service man who is doing general work—handling calls on a wide variety of different makes of units—should carry about \$85 worth of parts and supplies in his car at all times, if he is to operate most efficiently."

"Of course there have been cases where a service man started 'on a shoestring' and went on to build up a full-fledged and profitable service operation, but these cases are the exceptions rather than the rule."

"Generally speaking, I would say that the man starting into the service business with from \$2,000 to \$2,500 capital behind him has the greatest chance for success. Until such time as he can accumulate that amount of capital, I think he would be far wiser to work for some established service organization. Because for the most part, trying to run a service business on insufficient capital can result only in inefficient operation and eventual customer dissatisfaction."

Commenting on his own business, Mr. Homan—who describes himself as "just an average business man who doesn't want to grow too big or too rich, but just to make a comfortable living and be happy"—says that he is no longer making definite promises on deliveries of any item which he does not have in stock.

"Even the word of the manufacturer, although given in good faith, is no longer any assurance that the materials will arrive on the specified date," Mr. Homan declared, "because the manufacturers themselves never know from one day to the next what new restrictions are going to be applied, or what percentage of their production is going to be commandeered for government use."

"And telling a service man that the part he needs will arrive on some specific date, and then finding that you are unable to deliver the part because the manufacturer hasn't been able to deliver it to you, only creates ill will on the part of the customer."

"So if one of my customers wants some item that I don't have in stock and can't obtain locally, I simply tell him that if he so desires I will order it for him and turn it over to him when, as, and if it arrives. By stating my position plainly in this manner, I have been pretty well able



Mills Condensing Units
By Mills Novelty Company
4100 Fullerton Ave., Chicago, Ill.



The Service Man's Notebook

By Henry Kronke

Mr. Kronke, a service engineer in New York City, compiles useful, handy data for use in his work as he finds a repeated need for certain kinds of information. The editors suggest that service and installation engineer readers of the NEWS cut these tables out for their own notebooks.

(This table giving the relative piston displacement for the various refrigerants can be very useful to a service engineer who may want to change a condensing unit from one refrigerant to another. Assume that he might want to change from sulphur dioxide to "Freon-12" with the capacity of the machine to remain the same. On the sulphur dioxide line he takes the figure 100 and then goes up vertically to the "Freon-12" line, where he finds the figure 64 in the corresponding position. Thus, for every 100 revolutions the compressor was making with sulphur dioxide, it would have to make but 64 when changed over to "Freon-12." If the changeover were the other way around, for every 100 revolutions with "Freon-12" the compressor would have to turn 156 with sulphur to get the same capacity.)

RELATIVE PISTON DISPLACEMENT FOR VARIOUS REFRIGERANTS FOR STANDARD TON CONDITIONS

Carbon Dioxide	100	27 1/2	16	15	10 1/2	8	5	3	2	1 1/4
Ammonia	364	100	59	56	38	30	17	9	7	5
"Freon-12"	617	169	100	95	64	51	28	16	11	8
Methyl Chloride	646	177	105	100	67	53	29	17	12	8
Sulphur Dioxide	964	265	156	149	100	79	45	25	18	12
Isobutane	1219	335	197	189	126	100	56	32	23	16
"Freon-21"	2215	608	359	343	230	181	100	58	42	28
"Freon-11"	3850	1060	624	596	400	316	177	100	73	49
Methyl Formate	5300	1455	858	820	550	434	244	137	100	62
Methylene Chloride	7850	2150	1272	1215	814	644	364	205	148	100

RELATIVE VOLUME OF LIQUID REFRIGERANT THROUGH ORIFICE FOR STANDARD TON CONDITIONS

Ammonia	100	68	66	64	47	43	35	23	22	12
Sulphur Dioxide	147	100	97	94	69	63	52	35	32	18
Methyl Formate	153	104	100	97	72	66	54	36	33	18
Methylene Chloride	157	107	103	100	74	68	57	37	34	19
Methyl Chloride	213	144	140	136	100	89	74	50	46	26
"Freon-21"	248	168	162	157	116	100	87	58	53	30
"Freon-11"	286	194	187	181	134	122	100	68	62	34
"Freon-12"	428	290	280	272	201	183	150	100	92	52
Isobutane	465	315	305	296	219	199	163	109	100	56
Carbon Dioxide	830	563	543	528	391	356	291	194	179	100

Copper and Brass Jobbers Seek Priority Rating In Meeting With OPM Officials

CHICAGO—With the objective of obtaining a priority rating for copper and brass jobbers, a five-man committee representing U. S. copper and brass distributors will meet with representatives of the OPM in Washington Sept. 4.

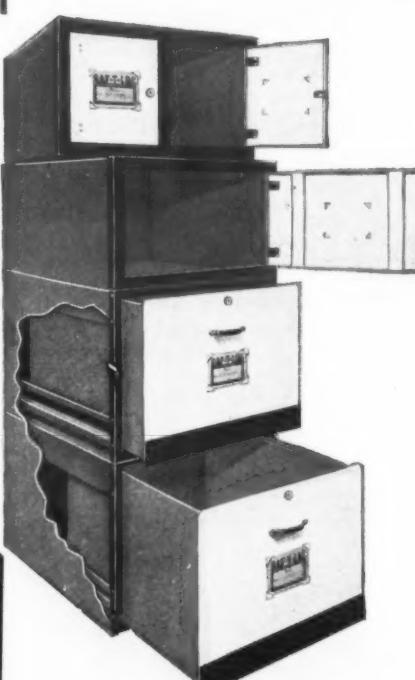
The committee, appointed at a recent meeting of distributors here, includes Howard H. Hubbell, general

manager, Brass & Copper Sales Co., St. Louis, Mo.; J. G. Norris, manager, brass and copper division, Central Steel & Wire Co., Chicago; Thomas Bohem, Whitehead Metal Products Co., New York City; Theodore Conklin, T. E. Conklin Brass & Copper Co., New York City; and M. Tiberg, Ducommon Hardware Co., Los Angeles.

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MAYFIELD, Ky.—A new frozen food locker plant has been opened here by Mike Levenson, with 120 lockers. Most of the lockers were rented in advance, so that expansion may soon be necessary.



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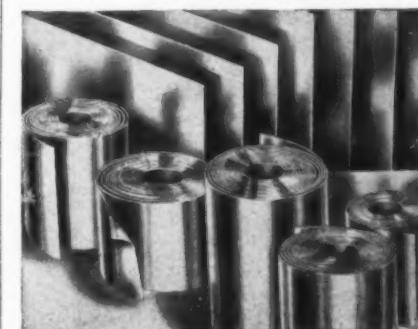
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Servicing Ice Cream Cabinets and Other Low Temperature Equipment

By Arch Black and Dean C. Seitz

Editor's Note: This is the fifteenth installment of a new section on ice cream cabinet servicing in the series of articles which covers servicing of all types of low temperature refrigeration equipment for use in retail business.

The High Side Float Valve System

During the 1932-33 ice cream cabinet season the high side float valve system was placed in use by one large manufacturer of ice cream cabinets. This system was used on the smaller sizes of portable cabinets. In 1935 and 1936 the system was adopted by a second large manufacturer of cabinets.

Both of these manufacturers have continued the use of the high side float system, and it is still in use today, not only on self-contained ice cream cabinets but likewise on other self-contained fixtures such as frozen food cabinets and beverage coolers.

The high side float valve system is fundamentally the same as the other two systems previously explained, namely, the low side float valve system and the automatic expansion valve system. The only

difference between the high side float and the two other systems lies in the refrigerant control valve.

The liquid refrigerant in this type of system is controlled by the liquid level in the high side float valve chamber in contrast to the low side float chamber. It is this level which controls the operation of the float bulb and allows refrigerant to enter the evaporator.

It is absolutely necessary to have the proper charge of refrigerant in the high side float system in order to insure correct operation. The condensing unit operation is controlled by means of a thermostat, the bulb of which is usually fastened to the ice cream storage compartment wall.

Fig. 8 shows a schematic drawing of a complete high side float valve system.

The refrigerant tubing which forms the evaporator is coiled around and soldered to a sheet metal tank, which houses the ice cream cans. This tank is insulated on all sides and when placed in a rigid framework becomes the ice cream cabinet itself. A typical cabinet using this construction is shown in Fig. 9.

The cycle of operation may be understood by reference to Fig. 8. The heat which enters the cabinet through the insulation, through the

lids, or from some products to be refrigerated in the cabinet, warms up the air inside the refrigerated compartment. This air gives up its heat to the ice cream cabinet walls. The walls, in turn, pass the heat into the refrigerant contained in the copper coils of the evaporator.

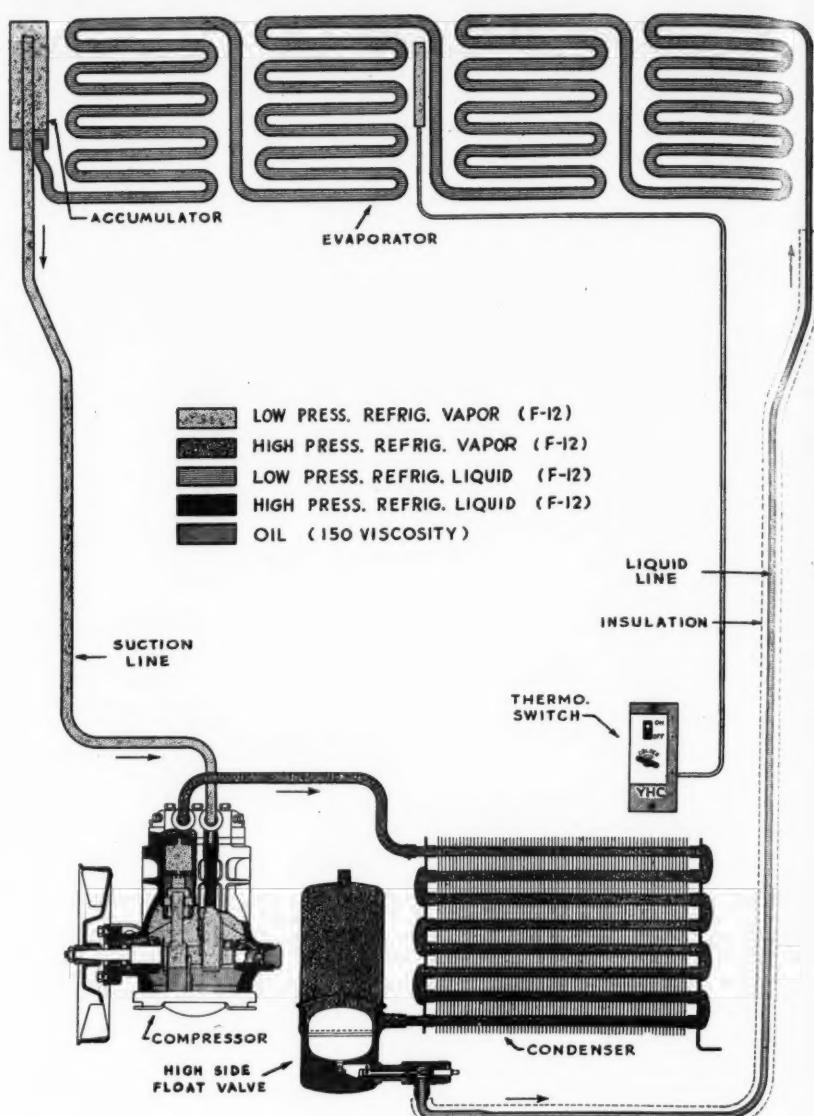
The refrigerant boils and changes to a gas. This low pressure gas is then drawn out of the evaporator coils, through the accumulator into the crankcase of the compressor. In the compressor the gas is compressed and again liquefied in the condenser. From the condenser it flows by gravity to the high side float valve chamber.

When there is enough liquid in the float valve chamber to raise the float bulb slightly and lift the needle from its seat, liquid refrigerant will flow to the evaporator. Inasmuch as the orifice of the high side float valve is the dividing point between the high and the low side of the system, the liquid refrigerant from the float valve chamber will flow into the evaporator under low pressure. At this point the liquid refrigerant is again ready to absorb heat from the storage compartment.

This cycle will continue as long as the condensing unit is in operation. A thermostat controls the operation of the condensing unit, thereby maintaining the desired ice cream cabinet storage temperatures.

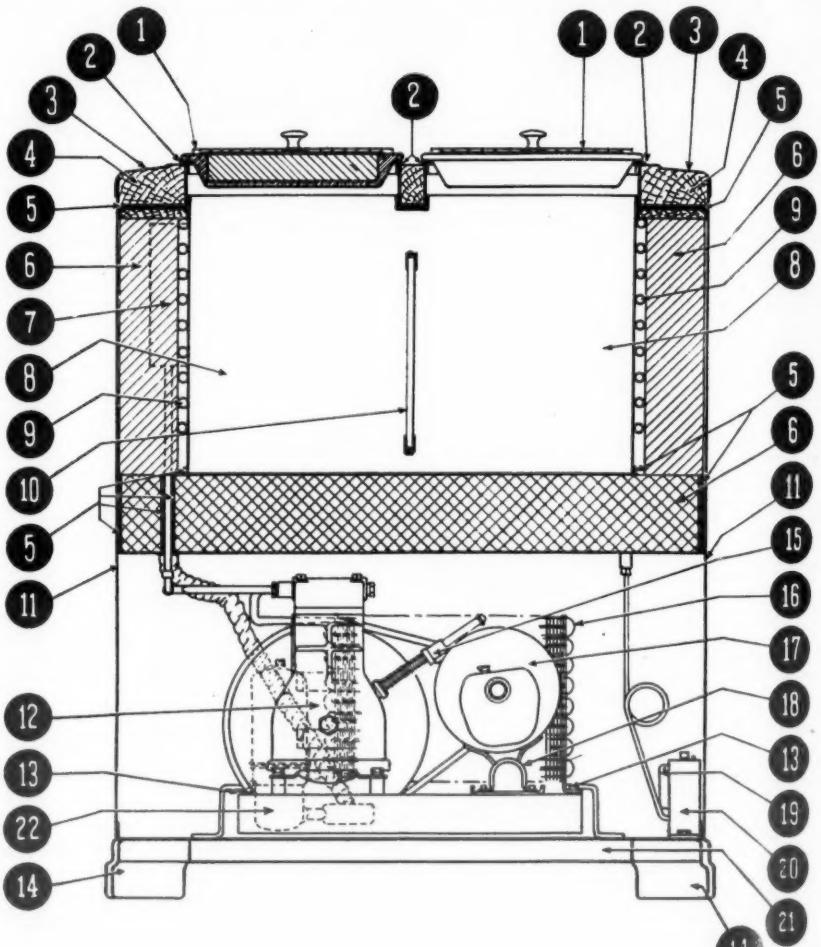
It should be noted that the liquid line leading from the high float to the evaporator is under low pressure. As a result, refrigeration will take place in this liquid line. Insulation is frequently placed around the line to prevent objectionable dripping, frost, or condensate on this line.

Fig. 8—How High Side Float System Operates



By referring to the "key" in the center of the diagram one can trace the operating cycle of a complete high side float valve refrigeration system. Note relative location of the high side float valve.

Fig. 9—Cabinet With High Side Float System



Construction details of a typical ice cream cabinet refrigerated by a high side float valve system can be noted in this cross-sectional view. Key to numbers follows:

1—Rectangular insulated lids. 2—Soft rubber collar. 3—Bright metal top. 4—Hardwood sub-top. 5—Asphalt sealing compound. 6—Insulation. 7—Accumulator. 8—Storage compart-

ment. 9—Evaporator. 10—Removable divider. 11—Cabinet shell. 12—Compressor body. 13—Suspension springs. 14—Black porcelain legs. 15—Automatic belt adjuster. 16—Condenser. 17—Motor. 18—Rubber motor mounting. 19—Thermostatic switch. 20—Switch bracket. 21—Black porcelain trim. 22—High side float.

St. Louis School Opens Refrigeration Course For Service Men

ST. LOUIS—Seventy-five men have enrolled in the opening class of a new course for the training of refrigeration servicemen, repair mechanics, and installation men being offered by the Hadley Vocational Training School here. The class was formed to supplement the serious shortage of competent refrigeration servicemen in this area, many of whom have recently swung over into defense industries.



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CHAR DAVIS IN SILE

Record Refrigerator Order In Birmingham

BIRMINGHAM, Ala.—In what was possibly the largest order for refrigerators ever filled in this territory, Westinghouse Electric & Mfg. Co. supplied refrigerators for 913 apartment units in Central City, the \$2,750,000 low rent housing project here, through Moore-Handley Hardware, Alabama distributor for Westinghouse.

The units are the "American Special," a 4.25-cu. ft. capacity box with shelf area of 8.53 sq. ft.

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AC&RMA Committee Fights For Bigger Allotment of 'Carbon Tet' For Freon; Declares Other Users Can Substitute

(Concluded from Page 1, Column 5)

The brief discussed the refrigerant situation in general, pointing out that possible substitutes for "Freon" both ammonia and methyl chloride are "short," because of defense needs. There is and will continue to be a plentiful supply of sulphur dioxide (the principal ingredients of which—sulphur and air—are not likely to grow scarce) for existing equipment and new machines of that type.

However, to permit use of sulphur dioxide in machines designed for operation with other kinds of refrigerant necessitates a change in the fundamental design of the machinery, the committee said, and this basic modification of machine design would require a period substantially in excess of a year to effect, the brief declared.

"Because of the shortage of 'Freon' refrigerants, it is probable that the manufacturers of refrigerating and air conditioning machinery will be unable to continue supplying equipment for essential civilian uses," declared the statement made to the Division of Civilian Supply. "The order just issued for the allocation of available supplies of 'Freon' refrigerants does not help the problem.

NOTHING LEFT FOR NEW

"After the direct priority orders for 'Freon' for defense uses are filled and the requirements for maintenance of existing refrigerating and air conditioning equipment (as covered by Classifications A, B, and C in the OPACS order) have been taken care of, there will be only a very small quantity, if any, of 'Freon' refrigerants available for new refrigeration and air conditioning installations (Classification D in the OPACS order).

"A substantial amount of new refrigerating and air conditioning equipment is currently required and will continue to be required for essential uses such as processing, transportation, and distribution of milk, meat, butter, eggs, and other perishable foodstuffs; production of medicinal and other chemicals, synthetic rubber, textiles, and plastics; and numerous other uses. It is certain that a number of these uses of refrigeration and air conditioning listed are absolutely essential to the economic and physical health of the country and vital in furnishing fundamental support to the defense program.

EXACT POUNDAGE GIVEN

"Kinetic Chemicals, Inc., is limited in its production of 'Freon' refrigerants by the amount of carbon tetrachloride available to it. Chlorine is a major component of carbon tetrachloride. Kinetic Chemicals, Inc., informs us that it is now obtaining 1,400,000 pounds of carbon tetrachloride a month. Kinetic needs 2,100,000 pounds of carbon tetrachloride a month to meet the demands of the defense program and all civilian requirements for 'Freon' refrigerants.

"Due to the recently arranged and voluntary curtailment by the refrigeration and air conditioning industry of other non-essential uses, it is estimated that 1,900,000 pounds of carbon tetrachloride per month would enable the production of sufficient 'Freon' refrigerants to meet the vital needs, viz., all defense requirements and those of Classifications A, B, and C of the OPACS order, and also the needs of new air conditioning and refrigerating equipment for essential civilian requirements."

The brief made the point that other users of carbon tetrachloride can easily substitute.

OTHER USERS NAMED

"Dry cleaners and metal degreasers," it said, "are two classes of users who consume large quantities of carbon tetrachloride. Both of these groups can, with little real difficulty, use substitute chemicals which are freely available in quantity. We have particular reference to the naphtha compounds, which both the dry cleaners and the metal degreasers found quite satisfactory for their purposes and were in general use up to a few years ago.

"The dry cleaners may raise the objection that city ordinances in

many instances prohibit the use of naphtha compounds as a cleaning fluid in certain locations and in certain types of buildings. That is true, but there should be sufficient dry cleaning establishments to take care of the public requirements in buildings suitably located and with the proper safeguards so that naphtha compounds may be freely used, as they were used prior to the recent popularity of carbon tetrachloride as a cleaning agent.

"So far as the metal degreasers are concerned: There is small doubt but that they could quite easily use the naphtha compounds in place of the scarcer chlorine compounds. As most of the metal degreasing operations are carried on in industrial areas, the fire hazard objection is minimized.

"We sincerely believe that the allocation of a larger quantity of carbon tetrachloride to furnish 'Freon' refrigerants for vital civilian services will mean more toward preserving the basic life of the country than would be the case if a substantial allocation of carbon tetrachloride were given to such relatively non-essential industries as dry cleaning.

LABOR DISLOCATION SEEN

"If the refrigerating and air conditioning machinery industry were to be still further curtailed due to the lack of the above mentioned minimum quantity of carbon tetrachloride, there would be a dislocation of labor, a shutting-down of production departments, a destruction of highly skilled and specialized distributing and engineering organizations, and other economic damage to at least as great an extent as would be the effect on the general economy of the country if the curtailment were placed on the dry cleaning industry; BUT, in the case of the refrigerating and air conditioning machinery industry, there would be the additional adverse effect on the country which would not occur in the case of a comparatively non-essential service industry such as dry cleaning, viz., the resulting unavailability of new refrigerating and air conditioning equipment for the vital civilian requirements such as mentioned above.

"We respectfully request urgent action so that at least 1,900,000 pounds of carbon tetrachloride will be available to Kinetic Chemicals, Inc., each month starting with September, 1941."

Methyl Alcohol Is Now Under Priority Control

WASHINGTON, D. C.—All supplies of ethyl alcohol, methyl alcohol, potassium perchlorate, potassium permanganate, and toluene were placed under full priority control in a series of general preference orders issued last week by the Priorities Division of OPM. All the chemicals affected are considered essential to national defense.

In an amendment to a previously issued general preference order, formaldehydes and synthetic resins made from them also were placed under full priority control.

The two alcohol orders provide that defense orders for these products must be accepted, and shall be

assigned an A-10 preference rating unless a higher rating is specifically assigned. Both of the alcohols are essential in the making of explosives, and methyl alcohol has further uses in the plastics which may be used as substitutes for metal parts in airplanes.

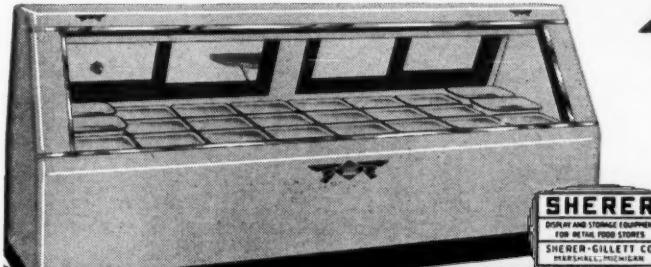
The amendment provides for the assignment of the B-8 rating until Sept. 30 on deliveries of synthetic resins molding powder to radio manufacturers in an amount not exceeding 75% of a manufacturer's requirements, for molded radio cabinets for September, if these requirements were covered by firm order on or before Aug. 23.

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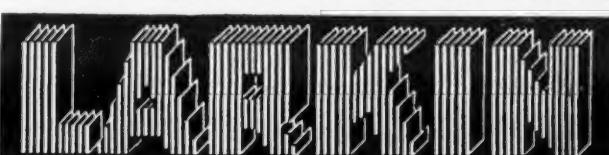
"I changed over to the Sherer line a year ago and have never regretted it for one minute," says one Sherer producer. You, too, can make sure of your share of 1941's extra business by selling Sherer's complete line of display and storage refrigerators, backed by closely-knit factory cooperation.



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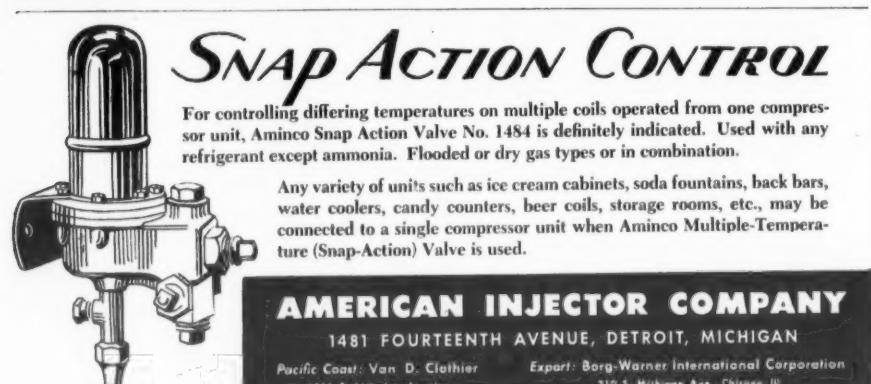
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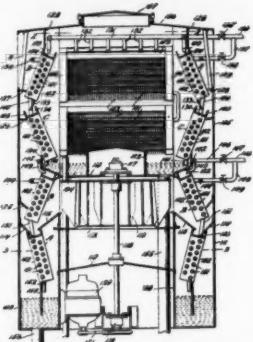
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9-3-41

PATENTS

Weeks of Aug. 5 & 12

2,251,261. COOLING TOWER. Stewart C. Coey, Glen Ridge, N. J. Original application Dec. 28, 1936, Serial No. 117,936. Divided and this application Oct. 8, 1937, Serial No. 168,103. 3 Claims. (Cl. 257—54.)



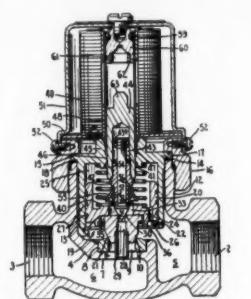
2. Cooling apparatus for liquids comprising a casing, heat-exchange means within the casing, means for circulating a liquid through interior passages in said elements to move the liquid progressively in a general downward direction, means to move a stream of air in a generally upward direction over the exterior surfaces of said heat-exchange means.

2,251,376. AIR CONDITIONING SYSTEM. Oscar A. Ross, New York, N. Y. Application Aug. 19, 1937, Serial No. 159,951. 2 Claims. (Cl. 257—3.)

1. In an air conditioning system, an enclosed space requiring the temperature thereof to be maintained within a desired normal temperature range, a refrigerant circulating system including a cooling unit for cooling said space and a motor driven compressor unit for circulating the

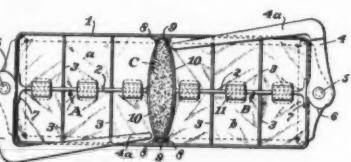
refrigerant in said system through said cooling unit, a heating system for heating said space, and thermostatic means controlling said motor driven compressor unit responsive to variations in temperature of atmosphere beyond said space.

2,251,441. VALVE. Earnest J. Dillman, Detroit, Mich., assignor to Detroit Lubricator Co., Detroit, Mich., a corporation of Michigan. Application Feb. 1, 1937, Serial No. 123,350. 5 Claims. (Cl. 137—139.)



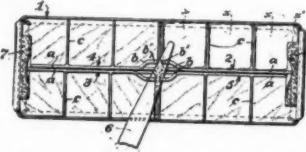
1. In a valve of the character described, a valve casing having a passageway therethrough including a valve port, said casing having a hollow extension concentric with said port, said extension opening at one end into said passageway and having its opposite end open, a hollow member having an end wall closing said opposite open end and having a depending side wall defining a pressure chamber.

2,251,460. ICE TRAY. James H. Miner, Meridian, Miss. Application July 19, 1937, Serial No. 154,501. 15 Claims. (Cl. 62—103.5.)



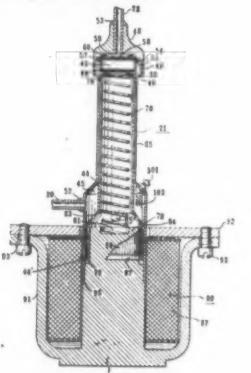
1. An ice tray organization comprising a tray, a grid positioned therein and made up of a pair of sections extending from opposite ends of the tray toward the center thereof, resilient means separating the sections and means for engaging either one of the sections and moving it toward the other section against the resistance of the resilient means for breaking the bond between the ice and the tray organization.

2,251,461. ICE TRAY. James H. Miner, Meridian, Miss. Application Sept. 4, 1937, Serial No. 162,477. 14 Claims. (Cl. 62—108.5.)



1. In combination in an ice tray organization for refrigerators, an ice tray proper, a divider comprising four sections mounted in the tray and individually removable therefrom, and means common to all the sections for moving a pair of said sections independently of the other pair, substantially as described.

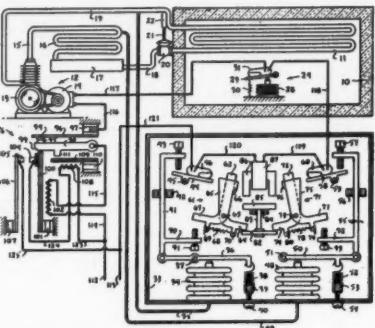
2,251,490. REFRIGERATING APPARATUS. Andrew A. Kucher, Dayton, Ohio, assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application Feb. 4, 1937, Serial No. 124,121. 15 Claims. (Cl. 230—55.)



1. A fluid compressor and driving mechanism therefor, comprising in combination a cylinder; a piston; one of the aforementioned members being arranged for floating movement relative to the other; means for imparting reciprocating movement to the movable member to cause the same to float in one direction; and means for preventing variation in fluid pressure from varying the extent of movement of said floating member.

2,251,503. REFRIGERATION CONTROL. Charles E. Spangenberg, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., a corporation of Delaware. Application Sept. 30, 1938, Serial No. 232,574. 26 Claims. (Cl. 62—4.)

1. In a control system for a refrigerating apparatus including a compressor and evaporator means for cooling a medium, the combination of, means including switch means for controlling the operation of the compressor, means responsive to a condition which is a measure of evaporator temperature for closing the switch means.



heat sufficient to cause the radiation of heat thereto from nearby human beings and having a crown portion above the zone of occupancy comprising a plurality of separate branches, said branches being of a character such as to break up air streams into a plurality of divergent air currents.

2,251,725. AIR FLOW COOLER. Virgil F. Warren, Miami, Fla., assignor to The Warren Co., Inc., Atlanta, Ga. Application Oct. 10, 1939, Serial No. 298,854. 2 Claims. (Cl. 62—102.)

1. An air flow cooler comprising in combination an elongated shallow housing having side and front walls and adapted to be positioned against the inner wall of a cooling chamber, an air inlet adjacent the top of a side wall, suction means for introducing air through said inlet in a very slow draft; downwardly directed conduits for said induced air, a conduit for a cooling medium arranged in coils with straight stretches transversely of the housing.

2,251,736. COUNTER COOLER. Budd Hill, Dallas, Tex., assignor to Counter Cooler Co., Dallas, Tex., a corporation of Texas. Application Feb. 9, 1940, Serial No. 318,187. 4 Claims. (Cl. 62—141.)

1. Counter cooler comprising a casing having an intermediate, transverse partition, a receptacle within the upper part of said casing of smaller diameter than said casing and spaced from the walls thereof and from said partition, an evaporator coil within said space wrapped about said receptacle in close heat exchanging relation thereto, the liquid and suction ends of said coil extending below said partition.

2,251,799. REFRIGERATOR SHELF. Alfred E. Nave, Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application Nov. 11, 1937, Serial No. 173,953. 6 Claims. (Cl. 211—147.)

1. In refrigeration apparatus, the combination of an insulated zone to be refrigerated, a cooling element for abstracting heat from the zone, a temperature-responsive means for controlling the temperature in the zone, means for compensating the temperature-responsive means in response to changes in the temperature of the media surrounding said zone.

2,251,860. AIR-DISTRIBUTING APPARATUS FOR VENTILATING SYSTEMS. Alfred S. Chipley, Chicago, Ill., assignor, by mesne assignments, to Burgess Battery Co., Chicago, Ill., a corporation of Delaware. Application Dec. 15, 1938, Serial No. 245,807. 17 Claims. (Cl. 98—33.)

1. In refrigeration apparatus, the combination of an insulated zone to be refrigerated, a cooling element for abstracting heat from the zone, a temperature-responsive means for controlling the temperature in the zone, means for compensating the temperature-responsive means in response to changes in the temperature of the media surrounding said zone.

2,251,881. REFRIGERATING APPARATUS. Irving J. Knudson, Kenilworth, Ill., assignor to Detroit Lubricator Co., Detroit, Mich., a corporation of Michigan. Original application May 14, 1935, Serial No. 21,354, now Patent No. 2,187,038, dated Jan. 16, 1940. Divided and this application March 17, 1939, Serial No. 262,482. 8 Claims. (Cl. 50—23.)

1. An expansion valve for regulating the temperature of a refrigerant evaporator comprising a valve casing having a passageway therethrough, a valve member in said passageway, means responsive to pressure in said passageway and controlling the operation of said valve member, said means cooperating with said casing to form a chamber separate from said passageway, a spring within said chamber and acting on said responsive means, and means for supporting said valve.

2,251,883. VENTILATING CONSTRUCTION. Howard H. Darbo, Berwyn, Ill., assignor, by mesne assignments, to Burgess Battery Co., Chicago, Ill., a corporation of Delaware. Application May 2, 1938, Serial No. 205,439. 15 Claims. (Cl. 98—13.)

1. In a ventilating system including a distributing duct having at least one side exposed to an enclosure to be ventilated and means for continuously supplying ventilating air to said duct, an ordination of narrow spaced-apart approximately parallel baffles arranged in a plane disposed as a wall of said duct at said exposed side thereof, and means for supporting said ordination of baffles.

2,251,890. REFRIGERATING APPARATUS. Irving J. Knudson, Kenilworth, Ill., assignor to Detroit Lubricator Co., Detroit, Mich., a corporation of Michigan. Original application May 14, 1935, Serial No. 21,354, now Patent No. 2,187,038, dated Jan. 16, 1940. Divided and this application March 17, 1939, Serial No. 262,482. 8 Claims. (Cl. 50—23.)

1. Refrigerator cabinet including a side of machine compressor side of the room for change r

2,251,904. APPARATUS FOR DECORATING THE INTERIOR AND IMPROVING THE ATMOSPHERE OF ENCLOSURES. Raymond Loewy, New York, N. Y., assignor to Chrysler Corp., Detroit, Mich., a corporation of Delaware. Application May 24, 1939, Serial No. 275,477. 8 Claims. (Cl. 62—140.)

1. In a ventilating system, an enclosure to be ventilated, means forming a plenum chamber extending superjacent said enclosure, the floor of said chamber having one or more openings therein, means for continuously supplying ventilating air to said chamber, and an interstitial body associated with each said opening in said floor of said chamber without said chamber, said body having connected lateral and vertical passages.

2,251,931. ZONE AIR CONDITIONING CONTROL SYSTEM. Ellsworth H. Danielson, Des Moines, Iowa, assignor to Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., a corporation of Delaware. Application June 23, 1938, Serial No. 215,429. 3 Claims. (Cl. 236—1.)

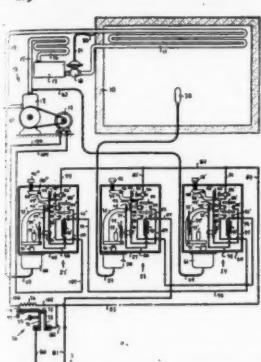
1. In an air conditioning system, comprising, means for changing the temperature of a fluid medium, a plurality of zones, means for circulating the fluid medium from said zones, flow regulating means for dividing the fluid between said

(Concluded on Page 15, Column 1)

Patents (Cont.)

(Concluded from Page 14, Column 5)
zones, a single motor for positioning said flow regulating means, modulating control means for said motor for causing the same selectively to position said flow regulating means in any predetermined position between extreme positions.

2,251,891. REFRIGERATION CONTROL SYSTEM. Alwin B. Newton, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., a corporation of Delaware. Application Sept. 6, 1938, Serial No. 223,508. 19 Claims. (Cl. 62—4)

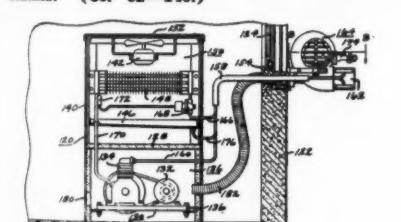


9. In a refrigeration system including a refrigerating apparatus having a compressor and evaporator means, the combination with said apparatus of a first relay including operating means and switch means operated thereby, a second relay including operating means and switch means operated thereby, first switching means, circuit connections controlled by the first switching means to energize the operating means of the first relay for closing the switch means thereof, second switching means.

2,251,907. FORCED AIR CIRCULATION COOLING UNIT. Anthony F. Hossel, Chicago, Ill., assignor to Peerless of America, Inc., Marion, Ind., a corporation of Illinois. Application May 27, 1939, Serial No. 276,104. 7 Claims. (Cl. 62—102.)

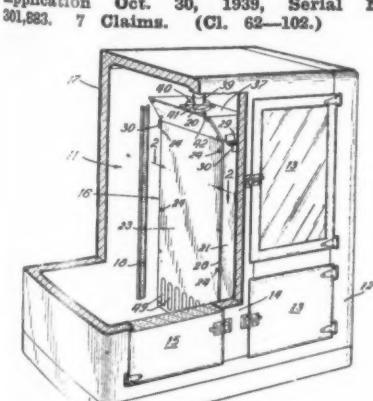
1. In a forced air circulation cooling unit, the combination of a casing, a fan to force air through said casing, a cooling coil within said casing and comprising extended surface refrigerant circulation conduits disposed angularly within the casing, and refrigerant baffle means within the said extended surface refrigerant circulation conduits the said baffle means comprising a twisted metal ribbon providing a multiple helical flow path adjacent the internal walls of the said conduits.

2,251,960. REFRIGERATING APPARATUS. Harry F. Smith, Dayton, Ohio, assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application June 1, 1938, Serial No. 32,726. 11 Claims. (Cl. 62—140.)



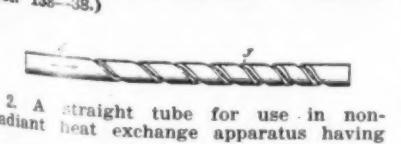
1. Refrigerating apparatus including a cabinet located in a room, said cabinet including a machine compartment and having an evaporating means located outside of the machine compartment, said machine compartment containing a motor-compressor unit, a condenser located outside the room, a fan located outside said room for circulating air into heat exchange relationship with said condenser.

2,252,010. PARTITION COOLING UNIT. J. Krackowizer, Chicago, Ill. Application Oct. 30, 1939, Serial No. 304,656. 7 Claims. (Cl. 62—102.)



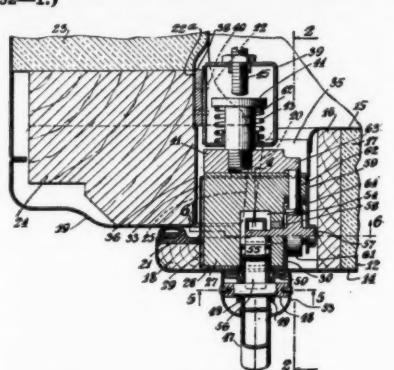
7. In a refrigerator, the combination with an enclosure having a cooling compartment and a self-contained combined compartment and cooling unit within the compartment and dividing the same into opposite sections and comprising cooling coils, an upright housing flared outwardly and upwardly and provided in its top wall with an air flow opening of greater width than that of the unflared housing portion.

2,252,048. TUBULAR HEAT EXCHANGE APPARATUS. Edward Frank Spanner, Blackheath, London, England. Application Jan. 4, 1940, Serial No. 312,376. In Great Britain Oct. 18, 1938. 3 Claims. (Cl. 138—38.)



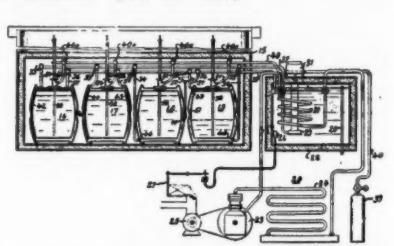
two or more spiral grooves inwardly pressed into it along practically the whole of its length, these grooves being of gradually increasing depth and decreasing pitch towards the exit end of the tube.

2,252,144. REFRIGERATOR DOOR LATCH. Robert S. Taylor and Clement Decker, Evansville, Ind., assignors to Servel, Inc., New York, N. Y., a corporation of Delaware. Application Dec. 27, 1937, Serial No. 181,738. 7 Claims. (Cl. 292—1.)



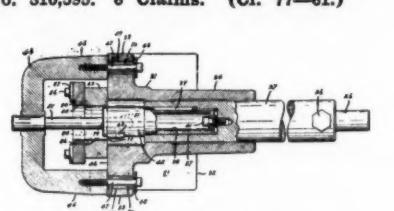
5. In combination with a cabinet having a door provided with a movably mounted handle to facilitate opening of the door, latch mechanism including a magnet element and a cooperating armature element to hold the door in closed position under the influence of the magnetic field in the magnet element.

2,252,173. REFRIGERATING APPARATUS. J. Lowell Gibson, Dayton, Ohio, assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application Jan. 27, 1938, Serial No. 187,235. 11 Claims. (Cl. 62—141.)



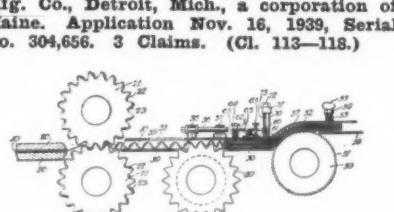
4. In a cooling and dispensing system wherein a beverage container is provided with means forming a cooling fluid flow passage connected in closed circuit relation with a cooling fluid circulating between a source and said flow passage to cool the contents of said container; that method of removing the container when empty from said closed circuit which comprises, discontinuing the flow of cooling fluid to the flow passage of said container.

2,252,203. MECHANISM FOR BORING COMPRESSOR CHAMBERS FOR REFRIGERATORS. Francis I. Bataczak, Dayton, Ohio, assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application Dec. 22, 1939, Serial No. 310,595. 6 Claims. (Cl. 77—61.)



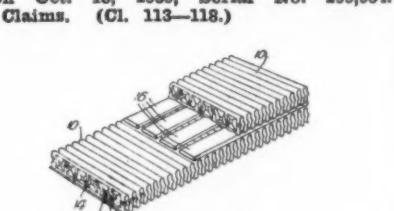
1. An apparatus of the class described comprising a device adapted to have a member to be worked upon removably clamped thereto, a revolving head member mounted within said device and movable relative thereto, a cutting blade rotatable with said head member and mounted thereon for movement perpendicularly relative to the axis of rotation thereof, guide means separate from said head member and stationarily mounted on said device, said guide means being offset with respect to the axis of said head member.

2,252,209. PROCESS OF MAKING HEAT-EXCHANGE ELEMENTS. Harry E. Schank and Paul R. Seemiller, Detroit, Mich., assignors to McCord Radiator & Mfg. Co., Detroit, Mich., a corporation of Maine. Application Nov. 16, 1939, Serial No. 304,656. 3 Claims. (Cl. 113—118.)



1. The method of making in a continuous process an accordion-pleated fin element having its folds substantially parallel with one another, which consists in moving endwise and reversely folding a metal strip with the bends between the folds rounded and of substantial width, progressively pressing said folds together as they are formed until adjacent folds contact with each other.

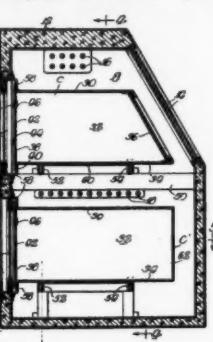
2,252,210. METHOD OF MAKING HEAT-EXCHANGE CORES. Paul R. Seemiller, Detroit, Mich., assignor to McCord Radiator & Mfg. Co., Detroit, Mich., a corporation of Maine. Application Oct. 18, 1939, Serial No. 299,954. 7 Claims. (Cl. 113—118.)



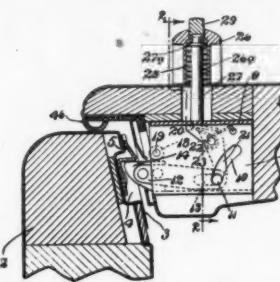
1. The method of making a heat-exchange core of the tubular type which comprises forming a thin, flat, metal tube with a lock seam on its side edge accurately made to act as a spacing means for the thickness of the tube; cutting said tube into predetermined lengths; forming pleated fin sections out of soft metal with folds substantially parallel with one another and with the folds of

a frequency sufficient to give said sections rigidity in the direction of their thickness.

2,252,237. FOOD STORAGE AND DISPLAY DEVICE. Edward M. Stiles, Burlington, Iowa. Application Oct. 2, 1939, Serial No. 237,567. 8 Claims. (Cl. 62—89.6.)



213,811. 10 Claims. (Cl. 292—63.)



10. In combination, a door, a latch mounted thereon comprising a channel-shaped support having spaced apart sides and a web, arc-shaped guides on said sides extending and curving away from said web, a pin having its ends received in said guides, a longitudinally extensible and retractable latch bolt connected at one end to said pin.

PATENTS

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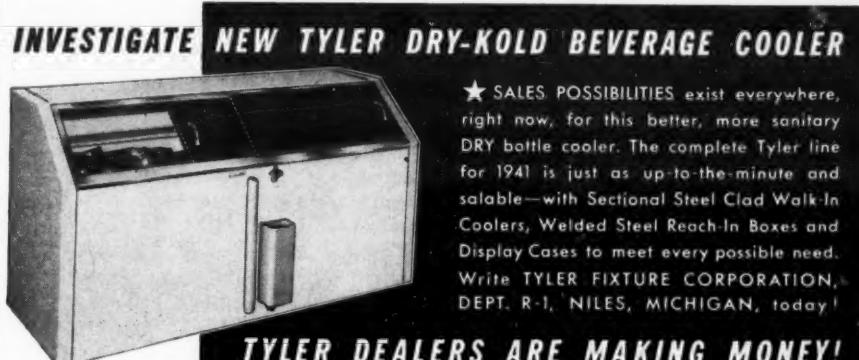
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This exceptional design permits easy removal and replacement of cartridge without loosening end connections. Dispersion tube for increasing drying efficiency and minimizing pressure drop is incorporated as integral part of refill cartridge.

Ask your jobber for it.

FILLED WITH SILICA GEL OR ACTIVATED ALUMINA
HENRY VALVE CO. 1001-19 N. SPAULDING AVE.
CHICAGO, ILLINOIS

ORDER
Ranco EXACT
Household Refrigeration
REPLACEMENTS
From Your Jobber

Toss Out the Old
Slip In the New—
and Make
More Money!

Appliance Time-Pay Limits

The following instalment credit regulations covering major appliances and other household equipment were put into effect Sept. 1 by the Federal Reserve Board. Maximum credit values indicate the amount of the contract which can be financed—80% meaning that a down payment of 20% is required, etc.

GROUP C

Articles of Consumers' Durable Goods (Whether New or Used)	Maximum Maturity in Months	Max. Credit Value in Basis Price
1. Mechanical refrigerators of less than 12 cu. ft. rated capacity..	18	80
2. Washing machines designed for household use.....	18	80
3. Ironers designed for household use.....	18	80
4. Suction cleaners designed for household use.....	18	80
5. Cooking stoves and ranges with less than seven heating surfaces	18	80
6. Heating stoves and space heaters designed for household use..	18	80
7. Electric dishwashers designed for household use.....	18	80
8. Room-unit air conditioners	18	80
9. Sewing machines designed for household use.....	18	80
10. Radio receiving sets, phonographs or combinations.....	18	80
11. Musical instruments composed principally of metals.....	18	80

GROUP D

1. Household furnaces and heating units for furnaces (including oil burners, gas conversion burners, and stokers).....	18	85
2. Water heaters designed for household use.....	18	85
3. Water pumps designed for household use.....	18	85
4. Plumbing and sanitary fixtures designed for household use..	18	85
5. Home air conditioning systems	18	85
6. Attic ventilating fans	18	85
7. New household furniture (including ice refrigerators, bed springs, and mattresses but excluding floor coverings, wall coverings, draperies, and bed coverings).....	18	90
8. Pianos and household electric organs	18	90

Senate Group OK's 10% Commercial Tax

(Concluded from Page 1, Column 1) on electrical appliances was amended to specify that the same 10% levy shall apply to gas and oil appliances as well.

In another amendment to the measure as approved by the House, all washing machines were brought under the tax, instead of commercial washing machines only, as had originally been specified.

Approved without change were the House excise tax schedules on mechanical refrigerators (10%), radios and phonographs (10%), cabarets, playing cards, luggage, rubber articles, club dues, matches, office equipment, business machines, jewelry, furs, the 5% transportation tax, and the \$5 "use tax" on motor vehicles and boats, the latter being modified to apply to those used chiefly for business purposes.

The electrical sign levy was amended to provide that signs advertising trade names shall be eliminated from the tax.

Black Named Commercial Sales Manager At Norge

(Concluded from Page 1, Column 4) Mr. Black has been with Norge continuously since joining the company's commercial sales department, in charge of export commercial sales, in 1937. He was appointed export manager in June, 1940.

A native of Scotland and former officer in the British navy, Mr. Black,

Assumes Added Duties



ARCH BLACK

now an American citizen, became associated with the refrigeration industry in 1926. In 1930 he participated actively in the organization of Liquid Cooler Corp., now Temprite Products Corp., and for three years served that firm as director of service.

Milwaukee Servicemen Reject Dealers' Offer Of \$38 Minimum

(Concluded from Page 1, Column 2) of \$38, the appliance committee declared it believed this figure to be more nearly in line with the demands of the existing situation, and more fair both to employer and employee. To reach this figure, it was suggested that an hourly rate of pay be worked out for service men employed by distributors and dealers, with distributor men getting 90 cents per hour for a 40-hour week and dealer men 80 cents per hour for a 48-hour week.

Hourly rate for dealer men, it was pointed out, would amount to \$38 on a 48-hour weekly basis, while the 90-cent rate for distributor men would provide \$36 per 40-hour week, with over-time pay bringing this total well over \$38 weekly in most cases. The union, however, held to its original demand.

Under the new contract, service employees employed one year receive one week's vacation with pay, and those employed for two years or longer receive two weeks with pay. Wage scale for service employees by the hour by a dealer or distributor was raised from \$1.25 to \$1.50, and transportation allowance for service men using their own cars was raised from 5 cents to 5½ cents per mile. Four-year apprenticeship was substituted for the seven-year plan provided in the old agreement, with the provision that apprentices shall be indentured to the union. This section of the contract also was amended to provide that apprentices shall attend the school conducted by the union on their own time, not that of the employer; and that employers shall not work apprentices over-time on the evenings of the classes.

Special Commercial Section Available As 16-Page Unit

Copies of the Special Commercial Refrigeration Section of the July 16 issue of AIR CONDITIONING & REFRIGERATION NEWS have been reprinted (with two additional pages added) as a 16-page individually bound section and are available at a cost of 20 cents per single copy, and at special quantity prices of 15 cents per copy for 10 or more copies; and 10 cents per copy for 50 or more copies.

Aimed at explaining to OPM, OPACS, and other government authorities the importance and scope of the commercial refrigeration industry, the Special Section has been praised by many readers and industry authorities as the most thorough survey of the commercial refrigeration market ever to be published.

Philadelphia 6-Month Sales Top 52,000 Units

Month	1941 Units Sold	1940 Units Sold	1939 Units Sold	1941 % Inc. or Decrease Over 1940	1941 Retail Value	1940 Retail Value	1941 % Inc. or Decrease Over 1940	1941 Average Price	1940 Average Price
January	5,009	4,257	3,118	+ 17%	\$ 748,786	\$ 685,501	+ 9%	\$149	\$161
February	6,818	4,869	4,473	+ 40%	1,031,104	750,862	+ 37%	151	154
March	8,023	6,199	5,804	+ 29%	1,243,965	930,708	+ 33%	155	150
April	12,107	7,879	4,826	+ 54%	1,909,150	1,220,874	+ 56%	158	154
May	11,169	10,232	9,007	+ 9%	1,803,420	1,564,776	+ 15%	162	152
June	9,082	9,258	9,361	- 1%	1,513,292	1,389,393	+ 9%	166	150
Totals	52,216	42,694	36,589	+ 23%	\$8,249,717	\$6,542,114	+ 26%	\$157	\$152

SALES BY PHILADELPHIA ELECTRIC CO.

Month	1941 Units Sold	1940 Units Sold	1939 Units Sold	1941 % Inc. or Decrease Over 1940	1941 Retail Value	1940 Retail Value	1941 % Inc. or Decrease Over 1940	1941 Average Price	1940 Average Price
January	355	104	125	+ 241%	\$ 52,295	\$ 18,157	+ 188%	\$147	\$174
February	542	262	87,977	+ 1%	85,109	85,109	+ 3%	162	158
March	811	608	268	+ 33%	138,559	96,575	+ 43%	170	158
April	1,618	1,072	541	+ 50%	289,395	183,666	+ 57%	178	171
May	1,617	1,686	1,487	- 5%	291,690	293,297	- 1%	180	173
June	1,306	1,717	1,498	- 24%	231,214	294,826	- 23%	177	171
Totals	6,249	5,724	4,181	+ 9%	\$1,091,130	\$971,630	+ 12%	\$174	\$169

Note: Utility sales approximate 11% of total sales.

Report covers sales in Philadelphia, Bucks, Montgomery, Delaware, and Chester counties. Report includes sales of the following makes: Coldspot, Crosley, Frigidaire, Gibson, General Electric, Hotpoint, Kelvinator, Leonard, Norge, Philco, Stewart-Warner, and Westinghouse.

cept June.

Steady increase in average sales price has been shown by dealers ever since the first of the year, the report indicates, whereas the opposite was true in 1940. In January, the sales average was \$149, compared with \$161 the previous year. June average had jumped to \$166, against \$150 in 1940.

Retail value of dealer sales

amounted to \$8,249,717, a gain of 26% over the \$6,542,114 reported for

1940.

Refrigerator sales in the Philadelphia area, the reports show, went as much as 54% above corresponding months of 1940 in every month ex-

cept June.

Those who have advocated the "replacement" policy hold to their point that it is less costly in most cases to replace with a new valve rather than to make factory repairs, the repair-at-the-factory policy should conserve much metal used in expansion valves that is now becoming short.

Metal thus saved will also permit the manufacture of more valves for new installation purposes, it is pointed out.

No other change was made in the guarantee policy of the one manufacturer who is now announcing the change from replacement to repair.

New Valve Repair Plan Aimed at Saving Metal

(Concluded from Page 1, Column 1)

out an announcement on a change in policy, and a survey made by the NEWS brought replies indicating that

Working for Defense . . . RESPONSIBLE Valves . . . Help Keep Soldiers Well Fed . . .

DEPENDABILITY, accuracy, efficiency, "trouble-free" operation, that practically guarantees satisfactory installation.

When YOU need the assurance of RESPONSIBLE Refrigerant Control on any job—Refrigeration or Air Conditioning—try A-P DEPENDABLE Valves. You'll keep on using them, for they help you to satisfied customers and higher profits on every job.

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